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OF THE

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ALPHABETICAL INDEX

TO THE

SESSIONAL PAPERS

OF THE

PARLIAMENT OF CANADA

SECOND SESSION, TWELFTH PARLIAMENT, 1912-13.

A

Agricultural Aid Act, Agreement with the several Provinces *re* expenditure of Subsidies under, &c.. .. .. 67*i*
Agriculture, Report of Dept. of.. 15
Agricultural School, Model Farm, &c., at New Carlisle, Que., Memorials, &c., *re*. 215
Aids to navigation that have been established on the Canadian Atlantic Coast.. 89
Aikins, J. A. M., Report of on 'Moral Instruction in the Canadian Public Schools'.. 96
Aldershot Military Camp, number of men at in summer of 1912; contracts given; cost of supplies, &c.. 182
Aldershot, N.S., *re* supply of ice for Military Camp at, &c.. .. .. 221*a*
Aldershot, N.S., *re* alleged thefts of property from the Militia Camp in Sept., 1912.. 221
Algoma Steel Co., applications for remission of duties on rails imported by at Fort William, &c.. 149
Amiot, P. E., Engineer Public Works Dept., Bonaventure Co., Que., *re* transferring of.. 138
Appeals made to Governor in Council, 12 months prior to March, 1912.. 117

A

Appointments:—
  General Foremen, &c. of Public Works of Co. of Bonaventure, since Oct. 1, 1911, to date, &c.. .. .. 72*j*
  Appointment of Mr. McCloskie as Postmaster at Wakan, B.C.. .. .. .. 72*k*
Archives Branch, *re* transferring of from Dept. of Agriculture to Secretary of State, &c.. 87
Archives Branch of Secretary of State, Report of work of for year 1912.. .. 29*b*
Asselin, Olivar, Report of *re* investigation of French and Belgian immigration into Canada.. 91
Astronomer, Chief, Report of for year ending March 31, 1912.. .. .. 25*a*
Atlantic, Quebec and Western Ry., Report of Engineers *re* usefulness of as feeders to I. C. Ry.. .. .. 67*j*
Auditor General:—
  Report of, Volume 1, A to J, for year ended March 31, 1912.. 1
  Report of, Volume 2, K to U, for year ended March 31, 1912.. 1
  Report of, Volume 3, V to Y, for year ended March 31, 1912.. 1
Australia, Commonwealth of, Preferential Tariff between Canada, and.. .. 94

B

Banque Internationale, application of to the Treasury Board, &c.. 130
Banque Internationale, *re* Certificate authorizing transfer of to Home Bank, &c.. 228
Beeman, J. C., cancellation of contract of, for conveying H. M. Mails, name of successor, &c.. .. .. 62*b*
Begin, Mr. J., appointment of as Manager of Experimental Farm at Ste. Anne.. 72*e*
Belgian and French Immigration to Canada, Investigation into by Olivar Asselin.. 91
Bills passed by House of Commons since Confederation, which have been amended by Senate.. 223
Bonaventure, Post Offices opened in since Oct., 1911, to date, &c.. 63
Bonaventure Co., Resolution of, asking for, or objecting to, certain public works in said Co.. 139
Bonds and Securities registered since last return, Nov. 28, 1911.. 53
Boulanger & Son, Quebec, Claims of, &c. 141*a*
Branch Lines I. C. Ry.:—
  Railway from Estmere to Baddeck, *re* building of.. 82
  Vale line of, *re* asking for road to be taken over by I. C. Ry., *re*.. 109
  Reconstruction of Branch line of into Guysborough Co., N.S.. .. .. 83*e*
Breakwater at Petite Rivière, Lunenburg Co. N. S., Report *re* repairs made on in year 1912.. .. .. 203*j*
British Consular Service, O. C. *re* facilities for information useful to Canadian Trade in connection with.. .. 118
British Canadian Loan and Investment Co., Ltd., Toronto, for year 1911.. .. 140
British Columbia, Copy of O. C. appointing a commission to inquire into claims of, &c.. 191
British Columbia, Memo. *re* claims of for special consideration.. .. .. 191*a*
British Columbia, Correspondence *re* claims of Indians of the Province, between Prov. Govt. and Dominion Govt. 159*a*
British Columbia, Documents *re* subject of increase of Prov. Subsidy to.. .. 67*g*
British Columbia, Memorials of Govt. of *re* claims for additional Prov. Subsidies.. .. .. 67*h*

B

Broderick, Post Office, Sask., *re* change of name of.. 78
Brulé Wharf, Colchester Co., N.S., *re* expenditures on during last two years &c.. 179
Brown, James W., in connection with western lands, pt. of S. E. ¼ section 21-20-21-W., 2 Meredian, and others, also Alex. Hurst Brown's claim *re* these lands.. .. .. 187*c*
Buildings occupied by the Govt. as public offices, under rent, where situated, &c.. 208

C

Cable Rates, Memo. on subject of between P. O. Dept. and British Post Office.. 93
Canada Steamer, *re* investigations regarding service performed by, &c.. .. 65
Canada-West Indian Conference.. 55
Canadian Fishermen, *re* recent increase in prices charged for Manilla Cord.. 185
Canadian Boat Fishermen, *re* Medical attendance on, &c.. 64
Canadian Pure Food Act, date of enactment of, &c.. 70
Canadian Trade and Commerce, extension of facilities for obtaining information useful to.. 118
Canadian Pacific Railway:—
  Orders in Council respecting, &c.. .. 45
  Return *re* lands sold by, year ending Oct. 31, 1912.. .. .. 45*a*
  Return *re* applications made by, for authorization to make new issue of stock.. .. .. 45*b*
Canadian Guardian Life Insurance Co., *re* transfer of from Dept. at Ottawa to Dept. at Toronto.. 188
Canals:—
  St. Peter's, Improvements on, also *re* contract between Department and W. H. Weller.. 108
  St. Peter's, Improvements on, also relating to contracts, &c.. .. .. 108*a*
  Relating to personal expenses paid by Government to Mr. St. Amour, Superintendent Soulanges Canal.. .. .. 108*b*
Census, 1911:—
  Population, Religions, Origins, &c. .. B
  Manufactures.. C
Civil Service:—
  Statement of affairs in connection with Civil Service Insurance Act.. 41

C

  Statement of superannuation and retiring allowances in Civil Service.. 44
  Civil Service List, 1912.. 30
  Report of Sir George Murray on organization of in Canada.. .. .. .. 57a
  Report of Civil Service Commission.. 31
Code, W. J., Report *re* investigation into Govt. Printing Bureau.. .. .. 61 (11z)
Commission Royal, Report of on Industrial Training and Technical Education. &c.. .. .. 191d
Commission Royal, Report of inquiry into complaints *re* weighing of butter and cheese in Montreal, &c.. 153
Commissioners, appointment of *re* study of causes for depopulation of country places, high cost of living.. 129
Commissioners, appointed to investigate complaints against United Shoe Machinery Co.. .. .. 95c
Commission Agents, complaints for placing farm labourers in Ontario.. 47
Commissioners appointed under first part of Inquiries Act, 1906.. 191
Commissioners appointed to inquire into claims of British Columbia.. .. .. .. 191a
Commissioners appointed to inquire into Indian Lands and Indian Affairs in B.C. 191b
Commissioners appointed to inquire into Law *re* Pilotage Districts of Montreal and Quebec.. .. .. 191c
Commission appointed to investigate charges of political partisanship in Govt. Printing Bureau, with evidence and Report.. .. .. 61 (11z)
Combines Investigation Act, Report of Proceedings under, year ended March 31, 1912.. .. .. 36c
Canada and Newfoundland, Volume of trade import and export between from Jan. 1, 1896, to Jan. 1, 1913, also Trade Agreement between Newfoundland and West Indies, included with Canada, for 1909, 1910, 1911 and 1912.. 195
Canada and Newfoundland, Volume of Trade, import and export, between, from Jan. 1, 1896, to Jan. 1, 1913, &c. (Supplementary Return).. .. .. 195a
Cariboo Island, Pictou Co., N.S., Papers in connection with expenditure at 97
Cement, Customs Tariff on, correspondence between Coy's., Corporations, &c., to Nov. 1, 1911.. 125
Cement, adjustment of Duty on, and all correspondence with Ministers respecting.. .. .. 125a

C

Census Enumerators, Reports as to delay in payment of, &c.. 76
Central Railway of Canada, Report made by the Railway Department.. 211
Champlain Market, Que., *re* acquisition of by Trans. Ry. Commissioners, for Station, Terminals, &c.. 170
Chartered Banks, List of Shareholders in, as on Dec. 31, 1911.. 7
Cheese, Butter, &c., Report of Royal Commission of inquiry into methods of weighing, payment, &c., Montreal. 153b
City of Sydney, Steamship Investigation into collision between tug *Douglas H. Thomas*, and 95e
Construction of road from North Bay to Sturgeon Falls, Ont., Correspondence and Engineers Reports *re*.. 178
Conference, International Peace, *re* consideration of first Century of between U. S. and British Empire.. .. 229
Correspondence, &c., by Conservative Candidate, Gloucester Co., N.B., *re* Public Works to date.. 187
Correspondence *re* East ½ of Sec. 27 in Tp. 6, Range 2, West of third Meridian.. 126
County Court Judges, *re* request of increased salary, and amendment to Judges Act *re* retiring allowances.. .. 173
Customs Department:—
  Report of.. 11
  Customs Tariff of Canada, changes made in by O. C., since last Session of Parliament, &c.. 73
Criminal Statistics for year ended Sept. 30, 1911.. 17
Crowe, Colonel, Commandant Royal Military College, *re* retirement, &c.. .. .. 75a

D

Dairy and Cold Storage Commissioner, Report of for year ending 1912.. .. .. 15a
Dry Dock at Lévis, Que., or Harbour and Port of Quebec, Que.. 204
Drill Hall at Fernie, B.C., *re* contract for erecting at.. 197
Drill Hall at Fernie, B.C., *re* awarding contract for erection of.. .. .. .. 197a
Dismissals:—
  Return *re* dismissal of John R. McDonald, Heatherton, Antigonish Co., N.S... 61
  Return *re* Dr. C. P. Bissett, Physician to Indians Salmon River, N.S.. .. 61a

D

Return *re* dismissal of Michael Murphy, P. M., at Pt. Michean, R. Co., N.S. 61*b*

Return *re* dismissal of David A. McLeod, P. M., at Cleveland, Richmond Co., N.S. 61*c*

Return *re* dismissal of John Milward, P. M., at Stormont, Guysborough Co. N.S. 61*d*

Return *re* dismissal of Kenneth F. McAskill, P. M., at Loch Lomond, Richmond Co., N.S. 61*e*

Return *re* dismissal of W. W. Hayden, wharfinger at Digby, N.S. 61*f*

Return *re* dismissal of W. B. Langley, Asst. at Lobster Hatchery, N.S. 61*g*

Return *re* dismissal of Fred. E. Cox, Engineer Lobster Hatchery 61*h*

Return *re* dismissal of Simon Hodgson, Engineer Lobster Hatchery, Isaacs Harbour, N.S. 61*i*

Return *re* dismissal of Henry Henlow, Engineer Lobster Hatchery, Canso, Guysborough Co., N.S... .. .. .. 61*j*

Return *re* dismissal of H. C. V. Le Vatte, Harbour Master at Louisburg, C. B. South, N.S. 61*k*

Return *re* dismissal of John Cummings, Asst. Lobster Hatchery, Isaacs Harbour, N.S. 61*l*

Return *re* dismissal of W. G. Matthews, of Life Boat Crew, Canso, Guysborough Co., N.S. 61*m*

Return *re* dismissal of Joseph Shean, Harbour Master, North Sydney, N.S. 61n

Return *re* dismissal of Geo. H. Sampson, of Storm Signal, Lower L'Ardoise, Richmond Co., N.S... .. 61*o*

Return *re* dismissal of Alexis Vigneau, Capt. Patrol Boat, Arichat, Richmond Co., N.S. 61*p*

Return *re* dismissal of Emeri Thivierge Fisheries Inspector, Cos. of Prescott and Russell, N.S. 61*q*

Return *re* dismissal of all public officers, Inland Revenue Dept., Co. of St. Jean Iberville, Quebec 61*r*

Return *re* dismissal of J. Fabien Bugeaud, Bonaventure, Que., A. B. Caldwell, New Carlisle, Quebec 61*s*

Return *re* dismissal of Duncan McArthur, Annuities Branch, while attached to Trade and Commerce 61*t*

D

Return *re* dismissal of Chas. O. Jones, Postmaster, Bedford, Co. of Missisquoi, Quebec 61*u*

Return *re* dismissal of Archd. Barss, Postmaster, New Harbour, Guysborough Co., N.S. 61*v*

Return *re* dismissal of Dr. A. Allaire of Penitentiary of St. Vincent de Paul 61*w*

Return *re* dismissal of Oscar Beauchamp, Warden of Penitentiary, St. Vincent de Paul 61*x*

Return *re* dismissal of John McDonald, freight handler, checker, I. C. Ry., Sydney Mines, N.S. 61*y*

Return *re* dismissal of Allan Kinney, Linwood, Antigonish Co., sectionman, I. C. Ry 61*z*

Return *re* dismissal of Chas. Landry, of Pomket, Antigonish Co., N.S., Sectionman I. C. Ry 61*aa*

Return re dismissal of Patk. Decoste, Ferry Stmr. *Scotia*, between Mulgrave and Point Tupper, N.S. 61*bb*

Return *re* dismissal of Harry E. McDonald, Asst. Engineer, St. Peters Canal, Richmond Co., N.S. 61*cc*

Return *re* dismissal of Neil Ross, sectionman I. C. Ry., West River, Pictou, N.S. 61*dd*

Return *re* dismissal of Jas. Armstrong, Heatherton, Antigonish Co., N.S., Sectionman I. C. Ry 61*ee*

Return *re* dismissal of Thos. J. Gray, car inspector, I. C. Ry., Westville, Pictou Co., N.S. 61*ff*

Return *re* dismissal of Colin Macdonald, sectionman I. C. Ry., James River, Antigonish Co., N.S. 61*gg*

Return *re* dismissal of A. T. Gannon, car inspector, I. C. Ry., North Sydney, N.S. 61*hh*

Return *re* dismissal of Huber Myatte, Tracadie, Antigonish Co., N. S., sectionman, I. C. Ry 61*ii*

Return *re* dismissal of John McDonnell, Afton Station, Antigonish Co., N.S., Sectionman, I. C. Ry 61*jj*

Return *re* dismissal of Wm. Landry, of Pomket, Antigonish Co., N. S., Section foreman, I. C. Ry 61*kk*

Return *re* dismissal of D. J. McDougall, Section foreman, I. C. Ry., Grand Narrows, N. S. 61*ll*

D

Return *re* dismissal of Daniel A. Coffey and W. A. McNeill, Lockmen, St. Peter's Canal, Richmond Co., N.S. 61*mm*

Return *re* dismissal of John P. Meagher, foreman deckhand steamship *Scotia*, Guysborough Co., N.S.. .. .. 61*nn*

Return *re* dismissal of Jas. Gibson, ex-P. M. of Alameda, Sask., *re* handing over office to E. Cronk.. .. .. .. 61*oo*

Return *re* dismissal of Capt. C. E. Miller, from 75th Regiment.. .. .. 61*pp*

Return *re* dismissal of J. N. N. Poirier, Collector of Excise, Victoriaville, Quebec, &c.. .. .. 61*qq*

Return *re* dismissal of Abraham Astephen, Interpreter, Immigration Department, North Sydney, N.S.. .. 61*rr*

Return *re* dismissal of Robt. Dow, Immigration Branch, Dept. Interior, Ottawa.. .. .. 61*ss*

Return *re* dismissal of John Ware, Immigration Branch, Dept. Interior, Halifax, N.S.. .. .. 61*tt*

Return *re* dismissal of Richd. Hickey, Immigration Branch, Dept. Interior, North Sydney, N.S.. .. .. 61*uu*

Return *re* dismissal of Dr. J. W. McLean, Medical Examiner, Immigration Dept., North Sydney, N.S.... 61*vv*

Return *re* dismissal of John A. McRea, Lightkeeper, Margaree Island, N.S.. .. .. 61*ww*

Return *re* dismissal of Thos. Brymer, Lightkeeper, Lower L'Ardoise, Richmond Co., N.S.. .. .. 61*xx*

Return *re* dismissal of Dominique Boudrot, Buoy contractor, Petit de Grat, Richmond Co., N.S.. .. .. .. 61*yy*

Return *re* dismissal of Fredk. F. Doucet, Lighthouse keeper, Caraquet, Gloucester Co., N.B.. .. .. 61*zz*

Return *re* dismissal of W. H. Henlow, Keeper of Storm Drum, Liscomb, N.S.. .. .. 61*aaa*

Return *re* dismissal of David Falconer, Lightkeeper, Cariboo Island, Pictou, N.S.. .. .. 61*bbb*

Return *re* dismissal of M. Wilson Lawlor, Harbour Commissioner, North Sydney, N.S.. .. .. 61*ccc*

Return *re* dismissal of P. J. McDonald, Harbour Commissioner, North Sydney, N.S.. .. .. 61*ddd*

D

Return *re* Names of all Lightkeepers in Province of N. S. dismissed since Oct. 11, 1911, &c.. .. .. 61*eee*

Return *re* Number of dismissals from public offices, Dept. Marine and Fisheries, Co. of Bonaventure.. .. 61*fff*

Return *re* dismissal of H. L. Tory, Fishery Officer, Guysborough, N.S., &c.. .. .. 61*ggg*

Return *re* dismissal of John W. Davis, Fishery Officer, Guysborough, N.S., &c.. .. .. 61*hhh*

Return *re* dismissal of Martin Bourque, Lightkeeper, River Bourgeois, N.S.. .. .. 61*iii*

Return *re* dismissal of Fredk. Poirier, Buoy Contractor, River Descouse, N.S.. .. .. 61*jjj*

Return *re* dismissal of Dr. Geo. Pinault, Medical Health Officer, Indian Reserve, Bonaventure Co., Que.. .. 61*kkk*

Return *re* dismissal of Fredk. Veit, Dept. Marine and Fisheries, Co. of Gaspé, Quebec.. .. .. 61*lll*

Return *re* dismissal of Alfred Lalonde, at Warehouse, Govt. yards, St. Joseph de Sorel.. .. .. 61*mmm*

Return *re* dismissal of Jas. Webber, Lightkeeper, Tor Bay Point, N.S.. 61*nnn*

Return *re* dismissal of Baptiste Desjardins, Lightkeeper at Kamouraska, Quebec.. .. .. 61*ooo*

Return *re* dismissal of Angus Smith, Pilot on steamer *Earl Grey*.. .. ..61*ppp*

Return *re* dismissal of Michael J. Sampson, Lightkeeper at Lower L'Ardoise, N.S.. .. .. 61*qqq*

Return *re* dismissal of Wm. Hackett, Harbour Commissioner, North Sydney, N.S.. .. .. 61*rrr*

Return *re* dismissal of Hormisdas Lacasse, Wharfinger, Govt. Wharf, Wendover, Prescott Co., Ont., &c.. 61*sss*

Return *re* dismissal of Geoffrey Gorman, Coxswain, Life Boat Station, Herring Cove, Halifax Co., N.S.. .. 61*ttt*

Return *re* dismissal of Capt. Geo. Wetmore, Harbour Master, Yarmouth, N.S.. .. .. 61*uuu*

Return *re* dismissal of Stanley Henlow, Lightkeeper, Liscomb, Guysborough, N.S.. .. .. 61*vvv*

D

Return *re* dismissal of H. C. V. Le Vatte, Fishery Officer, Louisbourg, Cape Breton, N.S.. .. ..61*www*
Return *re* dismissal of Elias M. Boudrot, Storm Signal Keeper, Petit de Grat, N.S.. .. .. 61*xxx*
Return *re* dismissal of A. B. Cox, Superintendent Reduction Works, Canso, N.S.. .. .. 61*yyy*
Return *re* dismissal of Jeffrey Crespo, Subcollector Customs, Harbour au Bouche, N.S.. .. .. 61*zzz*
Return *re* dismissal of Thos. Cameron, Preventive Officer, at Andover, N.B.61*aaaa*
Return *re* dismissal of L. W. Pye, Customs Officer, Liscomb, N.S.. .. ..61*bbbb*
Return *re* dismissal of Lucien O. Thisdale, Customs employee at Valleyfield, Quebec.. .. ..61*cccc*
Return *re* dismissal of Alex. Macdonald, Doctor's Brook, Sub-collector of Customs.. .. ..61*dddd*
Return *re* dismissal of Henry Cann, Customs Official and Preventive Officer, North Sydney, N.S.. .. .. ..61*eeee*
Return *re* dismissal of Chas. Mennier, Customs Officer, Marieville, Que....61*ffff*
Return *re* dismissal of Geo. H. Cochrane, Collector of Customs, Moncton, N.B., &c.. .. ..61*gggg*
Return *re* dismissal of C. Michaud, Postmaster St. Germain, Kamouraska Co., Que.. .. ..61*hhhh*
Return *re* dismissal of Emile Archambault, letter carrier at Montreal.. 61*iiii*
Return *re* dismissal of Norman Morrison, Postmaster, Ferguson's Lake, N.S.. .. .. 61*jjjj*
Return *re* dismissal of D. J. McKillop, Postmaster at McKillop, N.S.. .. ..61*kkkk*
Return *re* Investigation recently held at Ste. Agathe P.O., County of Terrebonne.. .. .. 61*llll*
Return *re* dismissal of Bertie Boudrot, Lightkeeper at Poulamon, Richmond Co., N.S.. .. ..61*mmmm*
Return *re* dismissal of Leon Rivest, J. B. Lachapelle and Louis Dubois, Lightkeepers at Repentigny, Que..61*nnnn*
Return *re* dismissal of L. P. Carignan, Forest Ranger, Champlain, Quebec.. .. ..61*oooo*

D

Return *re* dismissal of Jas. S. Harvey, W. L. Kempffer, J. Herbert Sweetman, J. B. LeBlanc, J. Nadeau, Preventive officers, Quebec.. .. ..61*pppp*
Return *re* dismissal of Wm. Marsh, Preventive Officer, at Little Pond, Sydney Mines, N.S.. .. ..61*qqqq*
Return *re* dismissal of Duncan McDonald, Customs Preventive Officer, Athelstan, Quebec.. .. ..61*rrrr*
Return *re* dismissal of Lemuel Bent, Collector of Customs, Oxford, N.S. 61*ssss*
Return *re* dismissal of Pascal Poirier, Collector of Customs, Descouse, N.S. 61*tttt*
Return *re* dismissal of Donald J. Hachey, Collector of Customs, Bathurst, N.B.. .. ..61*uuuu*
Return *re* dismissal of John Maher, Customs Department at Montreal..61*vvvv*
Return *re* dismissal of Peter Fougere, Preventive Customs Officer, Petit de Grat, N.S.. .. ..61*wwww*
Return *re* dismissal of Jas. Grantmyre, Preventive Officer at Little Bras D'Or, N.S.. .. ..61*xxxx*
Return *re* dismissal of Employees on Soulanges Canal, dismissed since September 21, 1911.. .. ..61*yyyy*
Return *re* dismissal of Andrew Melville, Locktender, Cardinal, Ont..61*zzzz*
Return *re* dismissal of Geo. Short, Canal Bridgetender, Cardinal, Ont.61*aaaaa*
Return *re* dismissal of N. Broderick, Locktender, Cardinal, Ontario.....61*bbbbb*
Return *re* dismissal of Thos. McLatchie, Locktender, Cardinal, Ont.61*ccccc*
Return *re* dismissal of Elgin McLaughlin, Locktender, Cardinal, Ontario.. .. ..61*ddddd*
Return *re* dismissal of Robert Robertson, Locktender, Cardinal, Ont....61*eeeee*
Return *re* dismissal of Wm. L. Gladstone, Locktender, Cardinal, Ontario.. .. .. 61*fffff*
Return *re* dismissal of Byron Van Camp, Locktender, Cardinal, Ontario.. .. ..61*ggggg*
Return *re* dismissal of Samuel English, Canal Bridgetender, Cardinal, Ontario.. .. ..61*hhhhh*
Return *re* dismissal of Edwd. F. Moran, Locktender at Cardinal, Ontario....61*iiiii*

D

Return *re* dismissal of Wm. R. Fougere, Frankville, N. S., Sectionman on I. C. Ry.. .. ..61*jjjjj*
Return *re* dismissal of John Melanson, Afton, N. S., Sectionman on I. C. Ry.. .. ..61*kkkkk*
Return *re* dismissal of Ronald D. McDonald, Fishery Overseer, Broad Cove, N. S.. .. ..61*lllll*
Return *re* dismissal of John McLean, Fishery Officer, Gabarouse, N.S.61*mmmmm*
Return *re* dismissal of A. R. Forbes, Fishery Overseer, North Sydney, N. S.. .. ..61*nnnnnn*
Return *re* dismissal of Sebastien Savoie, Superintendent, Lobster Hatchery, Shippegan, N.B.. .. ..61*ooooo*
Return *re* dismissal of D. S. Hendsbee, Weigher, Reduction Works, Canso, N. S.. .. ..61*ppppp*
Return *re* dismissal of M. Muce, Lightkeeper, Cheticamp Island, Inverness Co., N. S.. .. ..61*qqqqq*
Return *re* dismissal of Dr. J. D. R. Williams, Collector Canal Tolls, Cardinal, Ontario.. .. ..61*rrrrr*
Return *re* dismissal of John W. Bohan, Preventive Officer at Bath, Carleton Co., N. B.. .. ..61*sssss*
Return *re* dismissal of J. V. Smith, Sub-collector of Customs, Woods Harbour, Shelburne Co., N.S.. .. .. ..61*tttt*
Return *re* dismissal of John Y. Fleming, Customs Officer at Debec, Carleton Co., N.B.. .. ..61*uuuuu*
Return *re* dismissal of Matthias Meagher, Preventive Officer at Debec, Carleton Co., N. B.. .. .. ..61*vvvvv*
Return *re* dismissal of A. J. Gosselin, Acting Preventive Officer at St. Albans, Vermont.. .. ..61*wwwww*
Return *re* dismissal of Jas. W. Bannon, Preventive Customs Officer, St. Agnes de Dundee, Huntington Co.61*xxxxx*
Return showing number of Postmasters dismissed in Pictou Co., N.S., since 1911 and names of Postmasters succeeding them.. .. ..61*yyyyy*
Return *re* dismissal of Jas. Murphy, Postmaster at Tweed, Ont.. .. ..61*zzzzz*
Return *re* dismissal of H. B. Easton, Immigration Agent, Prescott, Ont.61 (6*a*)

D

Return *re* dismissal of B. Hughes, Immigration Agent, Prescott, Ont....61 (6*b*)
Return *re* dismissal of Geo. Walsh, Immigration Agent, Prescott, Ont.61 (6*c*)
Return *re* dismissal of Newton S. Dow, Immigration Agent, McAdam Junction, N.B.. .. ..61 (6*d*)
Return *re* dismissal of Oliver Hemphill, Immigration Agent, Debec, Carleton Co., N.B.. .. ..61 (6*e*)
Return *re* dismissal of Martin Johnston, Preventive Officer at Rea Islands, Richmond Co., N.S.. .. ..61 (6*f*)
Return *re* dismissal of J. E. Phaneuf, Postmaster St. Hugues, Co. Bagot, Quebec.. .. ..61 (6*g*)
Return *re* dismissal of Murdock, McCutcheon, Postmaster at Sonora, Guysborough Co., N.S.. .. ..61 (6*h*)
Return *re* dismissal of Duncan Gillies, Fishery Overseer at Baddeck, C.B., Province of N. S.. .. ..61 (6*i*)
Return *re* dismissal of Antonio Leduc, Postmaster of St. Timothée, Co. of Beauharnois.. .. ..61 (6*j*)
Return *re* dismissal of Chas. Arthur Bowman, Engineering Branch, Dept. Railways and Canals.. .. ..61(6*k*)
Return *re* dismissal of Elnathan D. Smith, Fishery Overseer, Shag Harbour, N.S.. .. ..61 (6*l*)
Return *re* dismissal of Donald McAulay, Lightkeeper, Baddeck Bay, Cape Breton.. .. ..61(6*m*)
Return *re* dismissal of John Fredericks, Lightkeeper, East Jordan, Shelburne Co., N.S.. .. ..61 (6*n*)
Return *re* dismissal of John Fredericks, Wharfinger, East Jordan, Shelburne Co., N.S... .. ..61 (6*o*)
Return *re* dismissal of John C. Morrison, Harbour Master, Shelburne, N.S.. .. ..61 (6*p*)
Return *re* dismissal of Captain Roderick McDonald, Tide Waiter at Big Bras D'Or, N.S.. .. ..61 (6*q*)
Return *re* dismissal of Jas. Maloney, Customs Officer, Dingwall, N.S....61 (6*r*)
Return *re* dismissal of Hugh D. McEachern, Customs Officer, East Bay, Cape Breton, N. S.. .. ..61 (6*s*)
Return *re* dismissal of Thos. H. Hall, Sub-collector of Customs, Sheet Harbour, N.S.. .. ..61 (6*t*)

D

Return *re* dismissal of J. A. McNeil, Customs Officer, Grand Narrows, N.S.. .. ..61 (6*u*)

Return *re* dismissal of Geo. Burchell, Customs Officer, Sydney Mines, N.S.61 (6*v*)

Return *re* dismissal of W. H. Saver, Collector of Customs, Cardinal, Ont.61 (6*x*)

Return *re* dismissal of Capt. Geo. Livingstone, Customs Officer, Big Bras D'Or, Cape Breton, N.S.. ..61 (6*x*)

Return *re* dismissal of H. Lacasse, Postmaster, Wendover, Prescott Co., Ont.. .. ..61 (6*y*)

Return *re* dismissal of Harry A. Drigg, Postmaster, Grassey Lake, Alta. ..61 (6*z*)

Return *re* dismissal of A. H. Stratton, Postmaster, Peterborough, Ont....61 (7*a*)

Return *re* dismissal of Henry Burrell, Postmaster, Yarmouth, N.S.. .. ..61(7*b*)

Return *re* dismissal of all Postmasters, Co. of Gloucester, N.B.. .. ..61 (7*c*)

Return *re* dismissal of Dr. Chas. A. Webster, Port Physician, Yarmouth, N. S.. .. ..61 (7*d*)

Return *re* dismissal of Jos. Lord, Lightkeeper at Pointe à la Mule, Co. of St. Jean and Iberville, Que.. .. ..61 (7*e*)

Return *re* dismissal of Henry Friolet, Wharfinger, Caraquet, N.B., and Richd. Southwood, Wharfinger, Bathurst, N.B.. .. ..61 (7*f*)

Return *re* dismissal of Jos. L. Robichaud, Lighthouse Keeper, Miscou, Co. of Gloucester, N.B.. .. ..61 (7*g*)

Return *re* dismissal of Capt. Pope, Lightkeeper, Scatarie, N.S.. .. .. ..61 (7*h*)

Return *re* dismissal of Capt. W. W. Lewis, Shipping Master, Louisburg, N. S.. .. ..61 (7*i*)

Return *re* dismissal of Postmasters Co. of Bonaventure since Oct. 11, 1911, Those appointed to replace them..61 (7*j*)

Return *re* dismissal of Geo. Hines, Lightkeeper, South Ingonish, N.S.61 (7*k*)

Return *re* dismissal of Lightkeepers in Co. of Two Mountains, by present Govt., &c.. .. ..61 (7*l*)

Return *re* dismissal of Archibald McDonald, Preventive Officer at Mull River, Co. of Inverness, N.S.. .. ..61 (7*m*)

Return *re* dismissal of Donald Chisholm, Preventive Officer, Tracadie, Co. of Antigonish, N.S.. .. ..61 (7*n*)

D

Return *re* dismissal of Edwd. C. Humphreys, of Inland Rev. Dept., of Trenton, N.S., and appointment of successor.. .. ..61 (7*o*)

Return *re* dismissal of H. J. Fixott, Port Physician, Arichat, Co. of Richmond, N.S.. .. ..61 (7*p*)

Return *re* dismissal of D. Morin, Postmaster of St. Pie de Bagot, Co. of Bagot, Quebec.. .. ..61 (7*q*)

Return *re* dismissal of Ernest Paquin. Postmaster of St. Cécile de Levrard, Nicolet Co., Quebec.. .. ..61 (7*r*)

Return *re* dismissal of John R. McDonald, Indian Agent at Heatherton, Co. of Antigonish, N.S.. .. ..61 (7*s*)

Return *re* dismissal of Joseph Day, Customs Officer at Little Bras D'Or, Cape Breton, N.S.. .. ..61 (7*t*)

Return *re* dismissal of Duncan McLeod, Appraiser of Customs at Sherbrooke, Quebec.. .. ..61(7*u*)

Return *re* dismissal of Edouard D. Chiasson, Sub-collector of Customs at Lamèque, Gloucester Co., N.B..61 (7*v*)

Return *re* dismissal of Geo. F. Briggs, Customs Officer, McAdam Junction, N.B.. .. ..61 (7*w*)

Return *re* dismissal of Wm. A. Duan, Lightkeeper at Green Island, N.S.61(7*x*)

Return *re* dismissal of Thos. Cameron. Preventive Officer at Andover, N.B.61 (7*y*)

Return *re* dismissal of Jos. McDonald, Customs Officer at Sydney, C.B., N.S.. .. ..61 (7*z*)

Return *re* dismissal of Angus McGillivray, Customs Officer, Glace Bay, South Cape Breton, N.S.. .. .. ..61 (8*a*)

Return *re* dismissal of Roderick Bain, Boatman, New Campbellton, Victoria Co., N.S.. .. ..61 (8*b*)

Return *re* dismissal of W. A. Scott, Lockmaster at Cardinal, Ont.. ..61 (8*c*)

Return *re* dismissal of Bert Johnson, Lockman at Nicholson, Ont.. .. ..61 (8*d*)

Return *re* dismissal of John Merrifield, Lockmaster, Burritts Rapids, Ont.. .. ..61 (8*e*)

Return *re* dismissal of Neil Cummings, Lockmaster, Cardinal, Ont.61 (8*f*)

Return *re* dismissal of François Chagnon, Lockkeeper at St. Jean, Co. of St. Jean and Iberville.. .. ..61(8*g*)

D

Return *re* dismissal of Neil McNeil, Bridgetender I. C. Ry., Grand Narrows, N. S.. .. ..61 (8*h*)

Return *re* dismissal of Archd. McKenzie, Sectionman, I. C. Ry., Grand Narrows, N.S.. .. ..61 (8*i*)

Return *re* dismissal of John Fraser, Bridgetender I. C. Ry., Grand Narrows, N.S.. .. ..61 (8*j*)

Return *re* dismissal of Demetrius Crozier, Lockman, Merrickville, Ont... .. ..61 (8*k*)

Return *re* dismissal of Patk. Cussuk, Lockman, Merrickville, Ont.. .. .. ..61 (8*l*)

Return *re* dismissal of Jos. H. Webster, Lockman, Nicholson, Ont.. .. ..61 (8*m*)

Return *re* dismissal of Cyrus O'Neil, Lockman, Nicholson, Ont.... .. ..61 (8*n*)

Return *re* dismissal of Michael Laughtin, Bridgeman, Burritts Rapids, Ont.. .. ..61 (8*o*)

Return *re* dismissal of John McKay, Bridgeman, Becketts, Ont.. .. .. ..61 (8*p*)

Return *re* dismissal of Edwd. Proctor, Lockman, Burritts Rapids, Ontario.. .. ..61 (8*q*)

Return *re* dismissal of Wm. Morrison, Lockman, Burritts Rapids, Ont...61 (8*r*)

Return *re* dismissal of Adam Henderson, Bridgemaster, Cardinal, Ont...61 (8*s*)

Return *re* dismissal of Jas. Feehan, Fishery Guardian at Tracadie Har. and Savage Harbour, P.E.I.. .. ..61 (8*t*)

Return *re* dismissal of John C. McNeil, Lightkeeper, Grand Narrows, N.S.. .. ..61 (8*u*)

Return *re* dismissal of A. A. Chisholm, Fishery Overseer at Margaree Forks, Inverness Co., N.S.. .. ..61 (8*v*)

Return *re* dismissal of Chas. E. Aucoin, Collector of Customs at Cheticamp, N.S.. .. ..61 (8*w*)

Return *re* dismissal of Chas. L. Gass, Postmaster at Bayfield, Antigonish Co., N.S.. .. ..61 (8*x*)

Return *re* dismissal of Cyprien Martin, of Customs Dept., St. Basile, Madawaska Co., N.B.. .. ..61 (8*y*)

Return *re* dismissal of Angus A. Boyd, Postmaster, Boyd's P.O., Antigonish Co., N.S.. .. ..61 (8*z*)

Return *re* dismissal of John B. Macdonald, Postmaster at Glasburn, Antigonish Co., N.S.. .. .. 61 (9*a*)

D

Return *re* dismissal of Alex. G. Chisholm, Postmaster at Ohio, N.S.. ..61 (9*b*)

Return *re* dismissal of John J. McLean, Postmaster, Cross Roads, N.S.. ..61 (9*c*)

Return *re* dismissal of Dugald McDonald, Postmaster. Doctor's Brook, N.S.. .. ..61 (9*d*)

Return *re* dismissal of Dan. A. McInnes, Postmaster, Georgeville, N.S.61 (9*e*)

Return *re* dismissal of E. A. Asker, Harbour Master, Campbellton, N.B....61 (9*f*)

Return *re* dismissal of Wm. Shultz, Caretaker of the Armouries, Kentville, N.S.. .. ..61 (9*g*)

Return *re* dismissal of Dr. Freeman O'Neil, of the Marine Hospital, Louisburg, N.S.. .. ..61 (9*h*)

Return *re* dismissal of Leon N. Poirier, Wharfinger at Descouse, N.S.61 (9*i*)

Return *re* dismissal of Norman L. Trefry, Shipping Master, Trefry, N.S.. .. ..61 (9*j*)

Return *re* dismissal of Jas. Amereault, Lightkeeper, New Edinburgh. N.S.. .. ..61 (9*k*)

Return *re* dismissal of H. B. Manley, Dominion Lands Office, Saskatoon, Sask.. .. ..61 (9*l*)

Return *re* dismissal of John Spicer, Senior Assistant, Moosejaw Land Agency.. .. ..61 (9*m*)

Return *re* dismissal of Robt. Pragnall, Agent Dominion Land Office, Swift Current.. .. ..61 (9*n*)

Return *re* dismissal of G. M. Ullyott, Dominion Land Office, Saskatoon..61 (9*o*)

Return *re* dismissals in Riding of Saskatoon, to date, &c.. .. ..61 (9*p*)

Return *re* dismissal of J. N. Poirier, Collector of Excise, Victoriaville, Arthabaska. Que.. .. ..61 (9*q*)

Return *re* dismissal of John G. Morrison, Fishery Inspector, Englishtown, N.S.. .. ..61 (9*r*)

Return *re* dismissal of Edwd. Landry, Lightkeeper, Petit de Grat, N.S..61 (9*s*)

Return *re* dismissal of Evariste Talbot, General Freight Office, I. C. Ry....61 (9*t*)

Return *re* dismissal of Philip H. Ryan, I. C. Ry., Mulgrave, N.S.. .. .. ..61 (9*u*)

Return *re* dismissal of Postmasters and other P. O. employees in Dominion, from July 1, 1896, to Oct. 1911, and from 1911 to date. Also number of post offices in operation in each Province to July 1, 1896..61 (9*v*)

D

Return *re* dismissal of Dr. Clarence T. Campbell, P. O. Inspector, London, Ont.. .. ..61 (9w)
Return *re* number of Postmasters dismissed in Missisquoi, since Oct., 1911.. .. ..61 (9x)
Return regarding changes in Post Offices, or Postmasterships, in Bonaventure Co., between Dec. 5, 1912, to date.. .. ..61 (9y)
Return *re* dismissal of S. A. Johnson, Postmaster at Petite Rivière, N.S.61 (9z)
Return *re* dismissal of Murdock McKenzie, Postmaster, Millville, Boulardarie, N.S.. .. ..61 (10a)
Return *re* dismissal of Jas. Stewart, Postmaster, Middleton, N.S.. .. ..61 (10b)
Return *re* dismissal of Lauchlin McNeil, Postmaster, New France, N.S.. .. ..61 (10c)
Return *re* dismissal of Frank Dunlop, Postmaster Groves Point, N.S.. ..61 (10d)
Return *re* dismissal of A. W. Salsman, Postmaster, Middle Country Harbour, N.S.. .. ..61 (10e)
Return *re* dismissal of Richd. Conroy, Postmaster, Cross Roads, N.S....61 (10f)
Return *re* dismissal of Abner Carr, Postmaster, St. Francis Harbour, N.S.. .. ..61 (10g)
Return *re* dismissal of Parker Sangster, Postmaster, Upper New Harbour, N.S.. .. ..61 (10h)
Return *re* dismissal of Alex. Marion, Postmaster, Rockland, Ont.. .. ..61 (10i)
Return Relating to charges of offensive partisanship against Postmasters in Co. of Russell.. .. ..61 (10j)
Return *re* dismissal of Mathew Boutilier, Postmaster at Mushaboom, N.S.. .. ..61 (10k)
Return *re* Names of Postmasters dismissed in Co. of Joliette from 1896, to Sept. 1911, &c.. .. ..61(10l)
Return *re* dismissal of T. Doane Crowell, Postmaster at Shag Harbour, N.S.. .. ..61 (10m)
Return *re* dismissal of Postmasters in Co. of Vaudreuil, dates of appointment, &c.. .. ..61 (10n)
Return *re* dismissal of Mrs. Spinney, Postmistress, at Upper Port La Tour, N.S.. .. ..61 (10o)

D

Return *re* Number of Postmasters dismissed in Rimouski Co., since Sept. 21, 1911, &c.. .. ..61 (10p)
Return *re* Number of public officials dismissed in Co. of Wright to Dec. 19, 1912, &c.. .. ..61 (10q)
Return *re* dismissal of John R. McLennan, Janitor Public Buildings, at Inverness Town, N. S.. .. .. ..61 (10r)
Return *re* dismissal of Jas. Arbuckle, Caretaker Public Buildings, Pictou, N.S.. .. ..61 (10s)
Return *re* dismissal of Mary Dunlop, Telegraph Operator at Groves Point, N.S.. .. ..61 (10t)
Return *re* dismissal of foremen on public works in Co. of Gloucester, N.B., from Sept. 21, 1911, to date..61 (10u)
Return *re* dismissal of Capt. Lyons of Dredge *Northumberland*, and appointment of successor.. .. .. ..61 (10v)
Return *re* dismissal of Jas. McCartin, Concrete Inspector on the 'Plaza,' City of Ottawa.. .. ..61 (10w)
Return *re* dismissal of Robt. C. Morrison, Postmaster at St. Peters, N.S.. .. ..61 (10x)
Return *re* dismissal of Richd. Dugas, Storm Signal Attendant at Alder Point, N.S.. .. ..61 (10y)
Return *re* Names of all officials of Dept. of Marine and Fisheries, Co. of Pictou, N.S., who have been dismissed.. .. ..61 (10z)
Return *re* dismissal of Wm. L. Munro, Lightkeeper at Whitehead, N.S..61 (11a)
Return *re* dismissal of Alex. R. McAdam, Fishery Officer for Antigonish Co., N.S.. .. ..61 (11b)
Return *re* dismissal of Stephen C. Richard, Lightkeeper at Charlos Cove, N.S.. .. ..61 (11c)
Return *re* Names, &c., of all persons in each Dept., inside and outside service, from Oct. 10, 1911, &c., dismissed from office.. .. ..61 (11d)
Return Relating to Public Officers dismissed in District of Lotbiniere, by present Govt.. .. ..61 (11e)
Return *re* dismissal of Miss Gertie Lewis, Postmistress at Main à Dieu, Cape Breton South, N.S....61 (11f)

D

Return *re* dismissal of John Taylor late Postmaster at Carnduff, Sask., &c.. .. ..61 (11*g*)

Return *re* dismissal of Frederick Mitchell, Postmaster at Dominion, N.S.. .. ..61 (11*h*)

Return *re* dismissal of Thos. J. Sears, Postmaster at Lochaber, N.S.. ..61 (11*i*)

Return *re* dismissal of Postmaster at Alsask, Saskatchewan.. .. ..61 (11*j*)

Return *re* dismissal or appointment of Fishery Guardians, &c., Co. of Guysborough, N.S.. .. ..61 (11*k*)

Return *re* dismissal of John R. Morrison, Postmaster at Oban, Richmond Co., N.S.. .. ..61 (11*l*)

Return *re* dismissal of A.G.McDonald, Postmaster at North East Margaree, N.S.. .. ..61 (11*m*)

Return *re* Number of dismissals from Constituency of Qu'Appelle, by present Govt. to Dec. 5, 1912.. .. ..61 (11*n*)

Return *re* dismissal of David Reid, Fishery Officer, Port Hilford, N.S.61 (11*o*)

Return *re* dismissal of Robert Musgrave,, Postmaster at North Sydney, N.S.. .. ..61 (11*p*)

Return *re* dismissal of A. D. Archibald, Postmaster, Glenelg, N.S..61 (11*q*)

Return *re* dismissal of Leon N. Poirier, Postmaster, Descouse, N.S..61 (11*r*)

Return *re* dismissal of Norman McAskill, Postmaster, Framboise, N.S.61 (11*s*)

Return *re* dismissal of A. T. Doucet, Postmaster and Collector of Customs, Salmon River, N.S.. .. ..61 (11*t*)

Return *re* dismissal of Mrs. Annie Gallivan, Postmistress, Whitney Pier, N.S.. .. ..61 (11*u*)

Return re dismissal of W. J. Paquet, Postmaster at Souris, P. E. I...61 (11*v*)

Return *re* dismissal of Postmaster at St. Anaclet, Rimouski Co., Que..61 (11*w*)

Return *re* dismissal of George Gunn, Postmaster at French Village, P. E. Island.. .. ..61(11*x*)

Return *re* number of dismissals from public offices riding of Mackenzie, Sask.. .. ..61 (11*y*)

Return *re* W. J. Code, Commissioner in *re* all charges investigated by, also Report of same.. 61

D

Return *re* dismissal of D F. McLean, Fishery Overseer, Port Hood, N.S.61 (12*a*)

Return *re* dismissal of J. Scott Nelson, Postmaster at Louisdale, N.S.. ..61 (12*b*)

Return *re* dismissal of Jos. McMullen, from Post Office, Bridgeport, N.S.61 (12*c*)

Return *re* dismissal of Fredk. A. Martell, Postmaster at L'Ardoise, N.S.61 (12*d*)

Return *re* dismissal of John A. Macdonald, Postmaster at McArras Brook, N.S.. .. ..61 (12*e*)

Return *re* Correspondence, &c., *re* dismissal of all officials from each Dept. inside and outside service, since Oct. last past.. .. ..61 (12*f*)

Return *re* dismissal of Edwd. Doucet, Sub-collector of Customs, Digby, N.S.. .. .. 61 (12*g*)

Return *re* dismissal of Mr. Le Blanc, Sub-collector of Customs, Church Point, N.S.. .. ..61 (12*h*)

Return *re* dismissal of John C. Bourinot, Chief Customs Officer, Port Hawkesbury, N.S.. .. ..61 (12*i*)

Return *re* dismissal of Alex. E. Morrison, Point Tupper, N.S., from service of I. C. Ry.. .. ..61 (12*j*)

Return *re* Documents, &c., received from Canadian Brotherhood of Railway Employees by Departments of Labour and Railways and Canals relating to dismissals of employees, &c.. .. ..61 (12*k*)

Return *re* dismissal of Jas. Falconer, of Newcastle, N.B., Correspondent of *The Labour Gazette*.. .. ..61 (12*l*)

Return *re* dismissal of John B. Chisholm, Lightkeeper, Port Hastings, N.S.. .. ..61 (12*m*)

Return *re* dismissal of Epiphane Nadeau, Immigration Agent at St. Leonard, N.B.. .. ..61 (12*n*)

Return *re* dismissal of D. J. Morrison, Boatman, Customs Service, Big Bras D'Or, N.S.. .. ..61 (12*o*)

Return *re* dismissal of Rod. McLeod, Boatman, Customs Service, Big Bras D'Or, N.S.. .. ..61(12*p*)

Return *re* dismissal of D. McLachlin, Postmaster, Marble Mountain, N.S.61 (12*q*)

Return *re* dismissal of Abram LeBlanc, Postmaster, West Arichat, N.S.. .. ..61 (12*r*)

Return *re* dismissal of Charles R. Lafford, Grand Cove, Richmond Co., N.S.. .. ..61 (12*s*)

D

Return *re* dismissal of W. S. Lawrence, Postmaster, Margrave Harbour, N.S.. .. ..61 (12*t*)

Return *re* dismissal of John K. McDonald, Postmaster at Whycocomagh, N.S.. .. ..61 (12*u*)

Return *re* dismissal of Capt. P. J. Wilcox, Customs Officer at Louisburg, N.S.. .. ..61 (12*v*)

Return *re* dismissal of M. J. McKennon, Customs Officer, Glace Bay, N.S.. .. ..61 (12*w*)

Return *re* dismissal of Capt. John Arsenault, Telegraph Line repairer, Alder Point, N.S... .. ..61 (12*x*)

Return *re* dissmissal of Mrs. John Arsenault, Telegraph Operator, Alder Point, N.S.. .. ..61 (12*y*)

Return *re* dismissal of A. J. Wilkinson, Mulgrave, N.S.. .. ..61 (12*z*)

Return *re* Charges made against Mr. H. A. Bayfield, Superintendent of Dredging, British Columbia..... ..61 (13*a*)

Return *re* dismissal of H. G. McKay, Lightkeeper at Bird Island, N.S.61 (13*b*)

Return *re* dismissal of Michael O'Brien Lightkeeper at Bear Island, N.S...61 (13*c*)

Return *re* dismissal of J. H. Leduc, Medical Port Officer at Three Rivers, Quebec.. .. ..61 (13*d*)

Return *re* dismissal of Patk. Shea, Postmaster, Tompkinsville, N.S...61 (13*e*)

Return *re* dismissal of Elias Rawding, Postmaster, Clementsport, N.S...61 (13*f*)

Return *re* dismissal of Chas. McLean, Postmaster, Strathlorne, N.S......61 (13*g*)

Return *re* dismissal of Angus R. McDonald, Postmaster at Broad Cove Chapel, N.S.. .. ..61 (13*h*)

Return *re* dismissal of John McPhail, Postmaster at Scotsville, N.S... ..61 (13*i*)

Return *re* Conduct of J. Morgan, late Postmaster, Village of Ailsa Craig, Ontario.. .. ..61 (13*j*)

Return *re* dismissal of Roderick McLean, Postmaster at Kenlock, N.S.61 (13*k*)

Return *re* dismissal of Allan Gillis, Postmaster at Gillisdale, South West Margaree, N.S.. .. ..61 (13*l*)

Return *re* dismissal of David Shaw, Postmaster at Marsh Brook, North East Margaree, N.S.. .. ..61 (13*m*)

Return *re* dismissal of Helen Joubert, Postmistress at Sayabec, Que....61 (13*n*)

Return *re* dismissal of D. A. Redmond, Postmaster at Brinston, Ont.. ..61 (13*o*)

Return *re* dismissal of Dan McEachern Postmaster at McEachern's Mills, N.S.. .. ..61 (13*p*)

Return *re* dismissal of Daniel Dunlop, Postmaster at New Campbellton, N.S.. .. ..61 (13*q*)

Return *re* dismissal of Arthur Armstrong, Postmaster, Greenfield, Carleton Co., N.B.. .. ..61 (13*r*)

Return *re* dismissal of Alex. Matheson, Postmaster, Boulardarie Centre, N.S.. .. ..61 (13*s*)

Return *re* dismissal of Arthur Talbot, Postmaster, Robertsville, Quebec..61 (13*t*)

Return *re* dismissal of N. O. Lyster, Postmaster at Lloydminster, Sask.61 (13*u*)

Return *re* dismissal of Mrs. Maggie Cameron, Postmistress, Achosnach, N.S.. .. ..61 (13*v*)

Return *re* dismissal of David Fraser, Postmaster at North East Margaree, N.S.. .. ..61 (13*w*)

Return *re* dismissal of W. Stayley Porter, Postmaster, Port Maitland, N. S.. .. ..61 (13*x*)

Return *re* dismissal of Alex. McQueen, Postmaster, Kowstoke, N.S.. .. ..61 (13*y*)

Return *re* County of Berthier, number of employees dismissed in, &c., since Sept. 21, 1911.. .. ..61 (13*z*)

Return *re* dismissal of Jesse L. Morton, Postmaster at Lower Argyle, N.S.. .. ..61 (14*a*)

Return *re* dismissal of Mrs. M. C. Gaudet, Postmistress at West Pubnico, N.S.. .. ..61 (14*b*)

Return *re* dismissal of John P. MacKinnon, Section Foreman on I. C. Ry., at Shubenacadie, N.S.. .. ..61 (14*c*)

Return *re* dismissal of Mary A. Bohan, Postmistress, Bath, Carleton Co., N.B.. .. ..61 (14*d*)

Return *re* dismissal of Edwd. Lafferty, Postmaster at Benton, Carleton Co., N.B.. .. ..61 (14*e*)

Return *re* dismissal of Denis McGaffigan, Postmaster at Florenceville, Carleton Co., N.B.. .. ..61 (14*f*)

D

Return *re* Documents *re* changes made or asked for in Dept. Marine and Fisheries, Bonaventure Co., Dec. 5, 1912, to date.. .. ..61 (14*g*)
Return *re* dismissal of J. A. McKenzie, Postmaster at Ashfield, Inverness Co., N.S.. .. ..61 (14*h*)
Return *re* dismissal of Jas. Bowles, Postmaster at Alder River, N.S..61 (14*i*)
Return *re* dismissal of Mr. Edmund Lacroix, Postmaster, Parish of St. Joseph du Lac, Co. Two Mountains, Quebec.. .. ..61 (14*j*)
Return *re* Lighthouse Keeper, Parish of Repentigny, Co. of L'Assomption, Quebec.. .. ..61 (14*k*)
Return *re* dismissal of B. C. Kanock, late Shipping Master at Lunenburg, N.S.. .. ..61 (14*l*)
Return *re* dismissal of Ulric Thibaudeau, Agent for Pilots at Quebec..61 (14*m*)
Return *re* Names of all officials of Marine and Fisheries Dept. in Pictou Co., N.S., dismissed, and appt. of successors.. .. ..61 (14*n*)
Return *re* dismissal of Capt. Freeman Myers, Postmaster at Cole Harbour, N.S.. .. ..61 (14*o*)
Return *re* Public Officers removed by present Govt. in Dist. of St. James, Montreal, Quebec.. .. ..61 (14*p*)
Return *re* All employees of Govt. in Edmonton dismissed between Oct. 10, 1911, and Nov. 21, 1912, salary paid, &c.. .. ..61 (14*q*)
Return *re* All officials in Dist. of Sunbury and Queens, dismissed since Sept. 1911; also *re* appointment of successors.. .. ..61 (14*r*)
Return *re* dismissal of Levi Munroe, Harbour Master, White Head, N.S.61 (14*s*)
Return *re* dismissal of Stanford Langley, Postmaster at Isaacs Harbour North, N.S.. .. ..61 (14*t*)
Return *re* dismissal of Hugh R. McAdam, Postmaster at Arisaig, N.S., appointment of successor.. .. ..61 (14*u*)
Return *re* dismissal of J. J. McNeil, at Grants Lake, N.S., &c.. .. ..61 (14*v*)
Return *re* dismissal of Alex. McInnis, Car Inspector I. C. Ry. at Mulgrave, N. S., &c.. .. ..61 (14*w*)

D

Return *re* dismissal of Archd. McDonald, Bridge Tender on I. C. Ry., at Grand Narrows, Iona, N.S..61 (14*x*)
Return *re* Names of all Officials dismissed in Shelburne and Queens, N.S., from Dec. 1896.. .. ..61 (14*y*)
Dea, Edmund, Investigation into conduct of as Overseer of Lobster Hatchery at Port Daniel, Que.. .. .. 95*e*
Demarcation of meridian, 141st Degree of West Longitude, Return *re*.. 91
Destructive Insect and Pest Act.. 49
Des Prairies River, dredging of, work performed, men employed, &c.. .. .. 135*b*
Digby, N.S., Documents *re* purchase of land for wharf at.. .. .. 203*d*
Dominion Lands, disposition of between April 8, 1905, and 1911.. .. .. 52*c*
Dominion Lands Act, Chap. 20, Statutes of Canada, Sec. 77 of.. 52
Dominion Lands Survey Act, Chap. 21, 7-8 Edwd. VII., O. C. *re*.. .. .. 52*a*
Dominion Lands within 40 mile Railway Belt Prov. of B.C., Orders in Council *re*.. .. .. 52*b*
Dominion Police Force, Report of Commissioner, *re* number of men employed on.. 79
Dominion Rifle Range in Co. of Carleton, date of purchase, and from whom. 123
Donaldson, Arthur, *re* Homestead entry on N. ½ S. W. ¼ Sec. 8, Tp. 49, R. 26, W. of 2nd Meridian, Sask.. .. .. 147*a*
Donaldson, Arthur, Correspondence *re* patent for land in Tp. 49, Range 26, West of 2nd Meridian.. 147
Dredging Contracts, how many let by Dept. Public Works, during 1911-1912. 135
Dredging made in Harbour of Bathurst, N.B., by Dredge *Restigouche*.. .. .. 135*e*
Dredging of Des Prairies River, Works performed, men employed, &c.. .. .. 135*b*
Dredging at Ste. Anne de Restigouche and Cross Point, Bonaventure Co., Quebec.. .. .. 135*a*
Dredging, Amt. of done by Govt. in P. E. I., season of 1912, &c.. .. .. 135*d*
Duchemin, Commissioner, *re* salary of, personal expenses, expenses for witnesses' fees, *re* investigations in Antigonish Co., N.S.. 175
Duchemin, Commissioner, Date of appointment of, gross amt. paid to, amt. for travelling expenses, witness fees, &c.. .. .. 175*a*

E

Earl Grey, D.G. Str., strike of firemen, and others employed on. 1912-1913.... 114
Earl Grey, D.G. Str., Investigation into causes of stranding of at Toney River, N.S.. .. .. 95*d*
East half of section 27 in Township 6, Range 2, West of third Meridian.. .. 126
Eastern Provinces, Return *re* cause for depopulation of country places, and high cost of living.. 129
Eastern Canada Power Co., *re* application to raise head of river near Coteau, Cedars, &c.. 180
Edmonton, Constituency of, appointments by Dom. Govt. in, from Oct. 10, 1911, to date.. .. .. 72*i*
Electric Lighting of Govt. Buildings, &c., at Ottawa, *re* name of Company holding contract for, &c.. 206
Election, Twelfth General, Report of the 18
Elections, By, for House of Commons for year 1912.. .. .. 18*a*
Employees in different Depts. at Ottawa, and nine Provinces and Territories, who have left employment since Oct. 1911 to Jan. 10, 1913.. 119
Employees in different Depts. at Ottawa, and nine Provinces and Territories, who have left employment since Oct. 1911 to Jan. 10, 1913 (Supplementary) 119*a*
Engineer, District, in Bonaventure Co., Quebec, Report of.. 176
Express statistics 20*e*
Experimental Farms, Report of Director of.. 16
Experimental Farm at Ste. Anne, appointment of Mr. J. Begin as Manager of.. .. .. 72*e*
External Affairs.. .. .. 29*a*
Estimates:—
  Estimates of sums required for Dominion for year ending March 31, 1913.. 3
  Estimates, Supplementary, for year ending March 31, 1913.. 4
  Estimates, Supplementary for year ending March 31, 1914.. 5

F

False Cove Flats, Vancouver, B.C., Lease of.. 115
Farm Labourers in Ontario, Complaints against Agents for placing in, during year 1910-1911.. 47
Farmers Bank, *re* correspondence relating to action by Govt. regarding relief of shareholders, depositors, &c.. 153
Farmers Bank, Report of Sir Wm. Meredith, Commissioner, into all matters connected with, &c.. .. .. 153*a*
Fenian Invasion, *re* Petition of Firmin Thibault, for indemnity.. 122
Female Labour, Documents *re* Revised Statutes of Sask., Chap. 17, regarding same.. 167
Fernie, B.C., *re* awarding of contract for construction of a drill hall, at.. 197
Fernie, B.C., Documents, &c., *re* awarding contract for, also copies of all tenders.. .. .. 197*a*
Fish Warden, Baker Lake, Madawaska Co., N.B., claims of present.. 141
Field Battery No. 10, Claims compensation by owners of horses attached to, in summer of 1912, &c.. 202
Florence Mining Co., Copy of Report of Minister of Justice in *re*.. 142
Franking Privileges, used by Provinces of Dominion, for Statistics.. 217
Forest Reserves and Parks Act, Sec. 19, Chap. 10, 1-2 Geo. V., Orders in Council *re*.. .. .. 56*a*
Forest Reserves, North side of Saskatchewan opposite city of Prince Albert, *re* the setting apart of.. 192
Freight Tariffs, different, in force on Ry. lines from Metapedia, N.B., Copy of.. 105
Freight Tariffs, different, in force on
Freight Tariffs, different, in force on Ry. lines from Sunnybrae, N.S., &c.. .. .. 105*a*

G

Grand Trunk Pacific Ry.:—
  Documents relating to Labour conditions on, between Tête Jaune Cache, and Fort George.. 166
Geological Survey Branch, Dept. of Mines, Report of.. 26
Geographic Board, Report of for year ending June 30, 1912.
Giffin, Chas. G., Isaac's Harbour, N.S., cancellation of contract with, *re* Lobster Hatchery.. 156

G

Governor General's Warrants (Statement of).. 43
and Etang, Documents in Dept. Public Works, *re* harbour improvements at. 203*f*
rand Etang, Documents in Dept. Public Works *re* harbour improvements at 203*f*
bec, St. John, N.B., and Halifax, during twelve months preceding 31st of Dec. 1912, showing domestic and foreign.. 151
Grosse Isle, Quarantine Station, appointment of additional physician at. 72
Grosse Isle, Quarantine Station, appointment of Physician at.. .. .. .. 72*f*
Guardian Life Insurance Co. *re* transfer of, from Dept. at Ottawa to Ins. Dept. Toronto.. 188
Gunshed or Store House for equipment of 18th Field Battery of Artillery, Antigonish, N.S.. 196

H

Harkaway Post Office, regarding closing of, and change of mail service.. .. ....158*t*
Hatfield, Chas. W., Fishery Officer on Tuskett River, N.S., appointment of.. 72*b*
Homestead Inspectors Rathwell and Erratt, *re* work done by in Moosejaw Land district.. 218
Homestead Inspectors Brandt, Balfour, Ouelette and Sipes, on work, in Regina Land district.. .. .. 218*a*
Homestead Inspectors Brandt, Balfour, Ouelette and Sipes, expenses of in months of June and July, 1912.. .. 218*b*
Homestead Inspector Miller, of Moosejaw Land district, expenses of in month of July, 1912, &c.. .. .. 218*c*
Homestead Inspectors Shields and McLaren, work performed by in Swift Current Dist.. .. .. 218*d*
Homestead Inspectors Shields, McLaren, Erratt and Rathwell, expenses in June and July, 1912.. .. .. 218*e*
Hudson Bay Co.'s Survey, patent relating to Lot No. 217 in Parish of St. John, Winnipeg.. 201
Hudson Bay Ry., Land withdrawn from settlement along line of, &c.. 232
Hudson Bay Ry., Purchase of land at Le Pas for terminals of.. 233

I

Indian Lands:—
  Sale of alleged Indian lands at Nyanza, N.S., &c.. 165
  Re lands sold by Coté's Band of Indians, also letters, &c., addressed to Supt. Genl. of Indian Affairs.. .. .. 165*a*
Insurance, Report of Supt. of, for year ended 1912.. 8
Intercolonial Railway:—
  Correspondence *re* supply of castings, and purchase of scrap iron.. 83
  Names of employees on dining cars of, and nature of employment.. .. 83*a*
  Relating to a strike of temporary employees on, at Halifax, N.S.. .. .. 83*b*
  Respecting an inquiry concerning an accident on, at St. André, Que.. .. 83*c*
  Inquiry and copy of evidence taken by Superintendent of, in reference to A. Laugnay.. .. .. 83*d*
  Relating to construction of a branch line of into Guysborough Co., N.S.. 83*e*
  Relating to transportation of hay over for farmers of Antigonish Co., N.S. 83*f*
  Relating to supply of ice for use of at Mulgrave, N.S.. .. .. 83*g*
  Relating to Documents on file in Dept. of Railways regarding public wharf at Sackville, N.B.. .. .. 83*h*
  Relating to Tender for supply of castings for, during present year.. .. 83*i*
  Showing how many kegs of nails were purchased for in 1912.. .. .. 83*j*
  Showing amounts received for freight and passengers for 12 months, years 1910, 1911, 1912.. .. .. 83*k*
  Re Water supply system at Dorchester Station, N.B.. .. .. 83*l*
  Re Case of M. L. Tracy of Mechanical Dept. of I. C. Ry., &c.. .. .. 83*m*
  Re Statement of amounts collected by I.C.Ry. for freight on Hay from Amhert consigned to Whidden & Son.. 83*n*
  Re proposed reduction of working hours for employees on I. C. Ry. at Moncton, or other points on.. .. 83*o*
  Re correspondence made by Sydney, N.S., Board of Trade, *re* better and increased facilities, on Sydney division.. .. .. 83*p*
  Re claim for damages for death of son of Thos. Hoare, killed at crossing of I. C. Ry., Stellarton, N.S.. .. .. 83*a*

I

- *Re* collision at St. Moise in Feb. 1913, between trains of E. Smith and regular No. 99.. .. .. 83*r*
- Return *re* names, occupations, &c., of all employees of I. C. Ry., dismissed in Co. of Rimouski, since September 21, 1911. (*See also dismissals*).. .. .. 83*s*
- Copy of Report of Privy Council of May 5, 1913, *re* appointment of F. P. Gutelius.. .. .. 83*t*
- Documents in Dept. of Postmaster General, *re* mail facilities between Moncton, N.B., westward toward St. John, and between Moncton and Springhill Junction, N.S., and other points.. .. .. 83*u*
- Return *re* contract for construction of any cars for I. C. Ry., since Jan. 1, 1913, &c.. .. .. 83*v*
- All amounts collected by, for freight on Hay from Amherst, &c., to Antigonish, in Jan., Feb. and March, last.. .. .. 83*w*

Immigrants coming into Canada year ending March 31, 1913, inspected by Govt. Medical Inspectors, &c.. .. .. 160*a*

Interprovincial Bridge, proposed, between Hawkesbury, Ont., and Grenville, Que.. 220

Icebergs and land, Report on the influence of on the temperature of the sea.. .. .. 21*c*

Iceton, Wm., of Purcell's Cove, claim of for return of a boat by Dept. of Marine.. 144

Immigration, Report of Inspector of Agents *re* placing of Immigrants, also Report *re* placing of in Ontario and Quebec during years 1910 and 1911.... 46

Immigration Office at Boston, U.S., *re* closing of in 1911, &c.. 84

Immigrants, number of who settled in Canada in 1911-1912, and from where.. 160

Imperial Defence, representations of the Committee on.. 85

Imports and Exports of Canada with Great Britain, U. S., Australia and New Zealand, during year ending March 31, 1912, in Agricultural products, &c.. 152

Increase in prices charged Canadian Fishermen for Manilla Cord, &c.. .. 185

I

Indian Affairs, Report of Department of.. 27

Indians of Micmac Reserve of Ste. Anne, Amount paid for Medical attendance, &c.. 164

Indians of B.C., Claims put forth on behalf of, &c., Report of Jas. McKenna on.. 159

Indians of B.C., Correspondence, Orders in Council *re* claims of, between Govt. of B.C. and Dom. Govt., &c.. .. .. .. 159*a*

Indian Reserves of B.C., Commission appointed to investigate.. 88

Industrial Disputes.. .. .. 36*a*

Influence of Icebergs and Land, on the temperature of the sea, &c.. .. .. .. 21*c*

Inland Revenue:—
- (Part I) Excise.. 12
- (Part II) Weights and Measures, &c. 13
- (Part III) Adulteration of Foods, &c. 14

Insurance Companies, Abstract of Statements of for year ended 1912.. 9

Insurance Rates between Canadian Atlantic Ports, and Ports in United Kingdom.. 89

Interior, Report of Department of.. .. 25

Internal Economy, Report of Commissioners of for preceding year, &c.. .. 58

Investigation at Port Daniel West, Que., into conduct of Edmund Dea, &c.. .. 95

International Waterways, Report of Commission on, &c.. .. .. 19*a*

Isle Verte, Co. of Temiscouata, *re* placing of a light on Wharf at.. 193

J

Japan, Treaty of Commerce and Navigation between United Kingdom and.. 190

Japan, Memo. of Consul General for, respecting regulation of emigration from Japan to Canada.. .. .. 190*a*

Justice, Report of Department of.. 34

K

Keewatin Territory, School System established in portion of annexed to Manitoba.. 168

Kelly, F. W., M.D., appointment of by Govt. as Port Physician at Bridgewater, N.S.. .. .. 72*h*

Kitsilano Indian Reserve, Documents dated since January 1, 1912, relating to.. .. .. 159*d*

K

Kraut Point, Lunenburg Co., N.S., *re* papers regarding construction of wharf at.. .. .. .. 179*a*

L

Land, area of thrown open for pre-emption &c., in Provs. of Alberta and Sask. since Oct. of 1908, &c.. 172
Land, one mile in width along line of Hudson Bay Ry., withdrawn from settlement, &c.. 232
Laurentides, construction of Public Building at, &c.. .. .. .. 207*a*
Labour, Report of Department of.. .. 36
Labour Gazette, The, names, professions, residences, &c., of correspondents of.. 199
Lake Timiskaming, construction of a dam at foot of, for storage purposes.. 120
Lake Timiskaming Dam, construction of in 1908 and 1909.. .. .. .. 120*a*
Lauzier, Arsene, of Amqui, Que., Inquiry made as to accident to horse of. 146
Laugnay, evidence taken at inquiry in reference to.. .. .. .. 83*d*
Lebœuf. Aurile, cancellation of lease No. 18778, by Minister of Rys.. 80
Librarians, Joint, Report of, for 1912.. 33
Lighthouse Keepers, List of removed by present Govt. in Co. of Two Mountains.. .. .. .. 61 (7*l*)
Liquor, Return *re* Section 88, Chap. 62, R. S., respecting amount of brought into N. W. Territories of Canada, &c. 112
Lévis, Dry Dock at, also Port of Quebec, Papers, &c., *re* construction of at.. .. 204*b*
Lévis, Dry Dock of, Report of Mr. Chas. Smith against Sampson et al.. .. .. 204*a*
Lena, Jean Baptiste, and his wife, *re* work done at public buildings at Valleyfield, Que.. 136
Lieut. Governors of different Provinces of Canada, instructions sent with Commissions.. 143
List of Shipping, issued by Dept. of Marine and Fisheries for year 1912.. .. 21*b*
Little Manitou Lake, Sask., Memo. *re* certain area transferred to town of Waterous, &c.. 219
Lobster Hatchery, establishment of at Spry Bay, Halifax Co., N.S.. 66
Lot No. 217 of the Hudson Bay Co's. Survey in Parish of St. John, Winnipeg.. 201

M

Militia and Defence:—
  Report of Militia Council year ending March 31, 1912.. 35
  Copies of Gen. Orders promulgated to Militia between Nov. 2 and Nov. 5, 1911.. 68
  Purchase of, and subsequent repairs to a private car by Dept. of.. 163
  Militia or regular forces, date of first call to aid of Civil authorities, called since, &c.. 127
Marine and Fisheries, Report of Dept., (Marine).. 21
Marine and Fisheries, Report of Dept., (Fisheries).. 22
Mastin, Miss, *re* presentation of certain chinaware to Govt. by, &c.. 198
Mayflower, Steamer, investigation *re* wreck of in November, 1912, &c.. .. 95*b*
Medicine Hat, Alta., *re* correspondence respecting transfer of 'Police Point Reserve,' to.. 145
Medical Attendance, &c., on Canadian boat fishermen.. 64
Melanson, Jos., clerk at Bathurst, N.B., alleged defalcation in accounts of.. 103
Memo. of Consul General of Japan *re* regulation of emigration from Japan to Canada.. .. .. .. 190*a*
Memorial presented to Govt. by Delegation from Govt. of P. E. Island, *re* subsidy.. 124
Mennier, Chas., ex-collector of Customs at Marieville, Que., *re* a claim of.. .. 157
Mexico, Return *re* correspondence between Dept. Trade and Commerce, *re* closing of office of Trade Commissioner in, &c.. 111
Militia, Return showing when regular force first called out in Canada, &c.. 127
Mines Branch, Department of Mines, (Report).. .. .. .. 26*a*
Miscellaneous Unforeseen Expenses.. .. 39
Molasses imported into Canada from British West Indies for year ending March 31, 1912, under Trade agreement with, &c.. 74
Monk, Hon. Mr., letter of resignation, &c.. 75
Moore, W. F., Lieut.-Col., 20th Regt. Halton Rifles, *re* resignation of.. .. 113

M

Moral Instruction in Canadian Public Schools, Report by Mr. J. A. M. Aikins.. 96
Mulgrave, N.S., and Cheticamp, N.S., Steam Service between, in years 1910-1911, 1911-1912 and 1912-1913.. .. .. .. 222a
Murray, Sir Geo., Report of on Organization of Public Service of Canada.. 57a
Macdonald, John, appt. of as Inspector Inland Revenue, Maritime Provinces. 72g
Marine Hospital at Pictou, N.S., correspondence *re* disposition of to any corporation or persons, &c.. 155
Mails and Mail Contracts:—
- Mail Contracts cancelled in Bonaventure Co., since Oct. 1, 1911.. .. 62
- Rural Mail Delivery routes established since Oct. 1, 1912.. .. .. 62a
- Mail contract, cancellation of between Postmaster General and Mr. Beeman.. .. .. 62b
- Mail Contract for carrying between Sorel and Ste. Victoire, Co. of Richelieu.. .. .. 62c
- Mail Contract for carrying between Heatherton and Guysborough, N.S., for 1912.. .. .. 62d
- Rural Mail between Salt Springs and West River Station.. .. .. 62e
- Rural Mail between Merigonish Station and Arisaig, Pictou Co., N.S.. 62f
- Contract for carrying mails between Linwood Station and Linwood P.O. 62g
- Correspondence *re* Railway Mail Service in Bonaventure Co., from Oct. 1911 to date.. .. .. 62h
- Contracts for carrying mails between St. Andrew and Beauley, Co. of Antigonish, N.S.. .. .. 62i
- Changes made in contract for carrying mails in Berthier Co., since Sept. 21, 1911, &c.. .. .. 62j
- Mail Contract *re* letting of between Guysborough and Charlos Cove, N.S.. .. .. 62k
- Names of various Ry. Mail Clerks in Montreal and Quebec divisions, &c.. .. .. 62l
- Contract between P. O. Dept. and Ont. Equipment Co., *re* purchase of locks for mail bags.. .. .. 62m
- *Re* correspondence, &c., between Postmaster General and Dr. Faucher, respecting patent lock for mail bags. 62n
- Correspondence between Postmaster General and Mr. Aimé Dion, Que., *re* patent lock for mail bags.. .. .. 62o
- Documents in possession of P. O. Dept. *re* carrying of mails between Linwood and Grosvenor, Guysborough Co., N.S.. .. .. 62p
- Names of Mail Carriers in Co. of Vaudreuil and Soulanges, amount of each contract, &c.. .. .. 62q
- Number of Post Offices in Co. of Yarmouth, N.S., not served with daily mail, &c.. .. .. 62r
- Contracts *re* purchase of Rural Mail delivery boxes, made by P. O. Dept. since 1908, until Jan. 1, 1912.. .. .. 62s
- Names of Post Offices and Postmasters in Counties of Soulanges and Vaudreuil.. .. .. 62t
- Mail Routes, Rural, established in Pictou Co., N.S., since Oct. 1911.. .. .. 62u
- *Re* purchase of new locks for mail bags by P. O. Dept., from Ont. Equipment Co., &c.. .. .. 62v
- *Re* Contract for carrying mails between Post Office and C. P. R. Station at Three Rivers, Que. since Oct. 1911.. .. .. 62w
- *Re* cancelled contract of M. E. Bougie for carrying mails between P. O., and Ry. Station, Bromptonville, Quebec.. .. .. 62x

Mc

McKelvey, Jas., of town of Sarnia, application of for Fenian Raid Bounty. 128
McKenzie, General, Documents, &c., *re* resignation of.. .. .. 75b

N

Nadeau, Louis, appointment of as Postmaster at St. Christine, Co. of Bagot. 72e
National Gallery of Canada, Return *re* acquisition of Paintings, &c., names of Artists, &c., since 1891.. 121
Navy, Royal Canadian:—
- Award of Compensation to men belonging to.. 48
- Naval Service, Report *re*.. 38
- Copies of plans in Tenders of Messrs. Cammel, Laird & Co., *re* construction of ships for Canadian Navy.. 48a
- Tenders for ships of War of Canada. 60

N

Navel Cadets, amendment to the regulations for entry of, Copy of O. C. *re*.. .. .. 48*b*
Northeast ¼ 14-75-15-5, Documents *re* during years 1911, 1912, 1913 to date.. .. 187*e*
Northumberland Strait, Reports in connection with Tides and Currents of.. 86
North ½ of S. West ¼ Sec. 8, in Tp. 49, Range 26 West of 2nd Meridian, Memo. *re* patent for.. 147
North Bay to Sturgeon Falls, Ont., *re* construction of a highway road from. 178
Northwest of 30-25-7-2, Documents relating thereto.. .. .. 178*b*
Northwest quarter section, 29-10-18, W, *re* documents connected with sale of. 187*d*
Nyanza, Cape Breton Co., N.S., sale of alleged Indian lands at.. 165

O

Ocean Mails Passenger and Freight Steamship Service between Canada and Great Britain, and Great Britain and Canada, Articles of agreement for said service, with contract for, &c.. 194
Official Statistics of Canada, Report of Departmental Commission.. .. .. ..77 & 90
Oil Paintings, Subjects of, which have become the property of the National Gallery of Canada.. 121
Ontario, Prov. of, respecting extension of boundaries of.. 101
Ontario and Quebec, area of Territories added to by Statutes of 1912.. 184
Ordinances of the Yukon Territory, (year 1912).. 51
Ordinances of the Yukon Territory, (year 1913).. 225
Orders in Council *re* seizure of horses from John Gobel, for smuggling same across to United States.. 212
Ottawa Improvement Commission, (Report of).. 42
Ottawa River, Amount of money expended on improving channel of, between Hull and village of Masson. 137
Ottawa, Properties purchased in, by Govt. North of Wellington and West of Bank Sts.. 177

P

Patent Number 142823, Petitions, plans, &c., in Patent Branch.. 214
Patent for N. ½ of S. W. ¼ of Sec. 8, Township 49, Range 26, W. of 2nd Meridian to Arthur Donaldson.. 147
Paintings, Oils and Water Colours acquired by Govt. since 1891, for National Gallery.. 121
Petite Rivière Breakwater, N.S., Documents, pay rolls, accounts, &c., connected with.. 203
Peace Conference, International, *re* consideration of first century of peace between United States and British Empire.. 229
Port Daniel West, Que., Investigation into conduct of Edwd. Dea, Guardian of Lobster Hatchery there.. .. .. .. 95*a*
Prince Edward Island, Govt. of, Memorial *re* a delegation from, asking increase of Prov. Subsidy.. 124
Privy Council, Report of *re* contract for Ocean Mail, Passenger, Freight Service, between Canada and Great Britain, &c.. 194
Prosecutions, &c., against Saml. Stewart, Melvin Hart and others for infraction of Fisheries Act, also charge against Rod. Martin, &c.. .. .. 141*b*
Properties purchased by Govt. north of Wellington St., and west of Bank St., in City of Ottawa, to Jan. 31, 1913, &c. 177
Peace River District, Amount of Seed Grain supplied to settlers in, during years 1912-1913, &c.. 200
Pilotage Commission of Quebec, Report of.. 186
Pilotage and its administration in Districts of Montreal and Quebec, also letter from Commissioner Ajutor Lachance, &c.. .. .. 191*c*
Police Point Reserve, transfer of property known as, to City of Medicine Hat.. 145
Portsmouth Penitentiary, *re* names of keepers dismissed, and upon whose recommendation they were reinstated, &c.. 174
Portsmouth Penitentiary, names of Discipline Officers, dates of appointments, &c.. .. .. 174*a*
Pomket River, Antigonish Co., N.S., *re* closing of Post Office at.. 158
Pomminville, Dr., appointment of as Surgeon of St. Vincent de Paul Penitentiary.. .. .. 72*c*

P

Post Offices opened in Bonaventure Co., since Oct. 11, 1911, names of postmasters, &c.. 63
Postmaster General, (Report).. 24
Preferential Tariff, between Govt. of Canada, and Commonwealth of Australia.. 94
Proposals to supply medicine to Canadian boat fishermen.. 64
Public Accounts.. 2
Public Works, Report of Department of. 19
Public Service Commission, Report of.. 57
Public Works Dept., Order for goods given by, since Oct. 1, 1911, at Montreal, Halifax, St. John, N.B.. 133
Public Printing and Stationery.. 32
Public Offices, buildings occupied by the Govt. as, under rent, &c.. 208
Public Service of Canada, Organization of, Report *re* by Sir Geo. Murray.... 57*a*
Pure Food Act, *re* date of enactment of. 70
Public Buildings at Three Rivers, Que., since Oct. 11, 1911, to date, &c.... .. 207
Public Buildings, construction of in town of Laurentides, Co. of Assomption, Quebec.. .. .. 207*a*
Public Buildings, construction of in town of Stellarton, N.S., 1912, Documents respecting, &c.. .. .. 207*c*
Public Buildings, work and repairs on in North Sydney, N.S., 192, Documents respecting, &c.. .. .. 207*b*

Q

Quebec Light, Heat and Power Co., Ltd., Correspondence, &c., *re* issuing letters patent to, &c.. 110
Quebec Oriental Railway, Acquisition of by the Govt. of Canada.. .. .. .. 67*d*
Quebec Railway Light, Heat and Power Co., Ltd., letters patent to.. 110
Quebec and Saguenay Ry., Proposed guarantee of Bonds.. 116
Quebec and Saguenay Ry., Report of Govt. Engineer who inspected the.. 67*e*
Quebec and St. Joseph de Lévis, *re* most suitable site for construction of Dry Dock at, &c.. 204
Quebec and Oriental Ry., and Atlantic, Quebec and Western Ry., documents *re* freight, passenger, &c.. .. .. 116*c*

Q

Quebec and Oriental Ry., and Atlantic Quebec and Western Ry., documents *re* their incorporation into Canadian Govt. Ry. System, &c.. .. .. 116*a*
Quebec Harbour, Correspondence between Postmaster General and Isidore Belleau, *re* improvements.. .. .. .. 203*i*

R

Reciprocity with United States, Correspondence, papers, &c., *re* between Jan. 1, 1890, and Dec. 31, 1891.. 71
Red Point Wharf, Lot 48, P. E. I., *re* repairs, contracts, &c., on same.. .. .. 203*c*
Regina, City of, *re* contribution for alleviating distress of sufferers in.. .. 189
Report of Mr. J. A. M. Aikins on moral instruction in the Canadian Public Schools.. 96
Restigouche River, Smelt and Salmon fishing, Instructions regarding.. 131
Restigouche, Fishermen's Association, Petition of, to Minister, asking removal of Mr. M. Mowatt, &c.. 205
Restigouche, Dredge, cubic yards removed by, in Harbour of Bathurst, N.B., during 7 months, 1911, &c.. .. .. .. 135*a*
Rifle Range, Carleton Co., Ont., *re* purchase of site for, &c.. 123
Railways:—
  Railway Commissioners, Report of.. 20*c*
  Railway, Transcontinental, Report of Commissioners of.. 37
  Railway, Transcontinental, Copy of original instructions furnished engineers on Eastern Division of.. .. 106
  Railways and Canals, Report of Dept. of.. 20
  Railway Statistics.. .. .. 20*b*
  Railway, Government of Canada, Return *re* Board of Management of.. 81
  Railway Line from Estmere to Baddeck, *re* building of.. 82
  Railway: *See* Intercolonial Ry., &c.
  Railway, Intercolonial, Reports formerly made to Board of Management of.. .. .. 81*a*
  Railway, Intercolonial, Relating to purchase of scrap and supply of castings for.. 83
  Railway, Intercolonial, Names of employees on dining cars, and nature of employment.. .. .. 83*a*

R

Railway, Intercolonial, Returns *re* Vale Line, correspondence asking road to be taken by, &c.. 109
Railway, Intercolonial, *re* a strike of temporary employees at Halifax, N.S.. .. .. 83*b*
Railway, Central Ry. of Canada, *re* Report made by to Railway Dept... 211
Railway, Copy of letter by Chief Engineer Lumsden of Trans. Commission to Chairman Wade.. .. .. 106*a*
Rocky Mountain Park Act, Orders in Council relating to (Chap. 60. Rev. Statutes).. 56
Royal Society of Canada, Report of Affairs of.. 50
Royal Northwest Mounted Police, Report of the.. 28
Rowlings, Geo. and James, Documents *re* prosecution of in 1910. for violation of Fishery Regulations.. .. .. 141*a*
Rowlings, G. A. R., J. S. Wells and S. R. Griffin, Letters to Dept. Public Works, *re* Public Works in Guysborough Co., N.S.. .. .. 203*h*
Rural Mail Delivery Routes established in Canada, since Jan. 1, 1912.. .. .. .. 62*a*
Rural Mail Service, establishment of between Saltsprings, and West River Station. (*See* Mails, &c.).. .. .. 62*e*
Rural Mail Service between Merigonish Station, Pictou Co., N.S., and Arisaig. (*See* Mails. &c.).. .. .. 62*f*

S

Salmon River Indian Reserve, N.S., *re* Indian School in, also appointment of teacher in since June 1. 1912.. .. .. 159*b*
Salmon Hatchery, purchase of a site for at Suidlope Lake, from J. B. Nicholson.. 98
Salmon, Sockeyes, of B.C., prohibition of export of from that Province.. .. 92
Sauvé, L. A., Claim of to certain buildings at La Pointe des Cascades, &c.. 107
School Lands, Provinces of Alberta and Saskatchewan, *re* Sale of since Oct. 12, 1911.. 213
School Lands, Provinces of Manitoba, Saskatchewan and Alberta, Showing lots sold in during year 1912, price, &c. 213*a*
School Lands, Province of Saskatchewan, sold in 1912, Correspondence, papers, &c., relating to in hands of Government.. .. .. 213*b*
Scrip, Half Breed, &c., papers *re* issuing of warrant No. 2155, certificate No. 672 to Albert St. Denis.. 231
Scoles, C. R., New Carlisle, Que., Claim of for balance of subsidy voted, &c.. 102
Seaforth, Halifax Co., N.S., Correspondence *re* tenders, contracts, &c., *re* construction breakwater at.. .. .. .. 203*a*
Secretary of State, Report of.. 29
Sevigny, Mr., increase of salary of, as employee of Immigration Office, Montreal.. 132
Shareholders in Banks, List of.. 6
Ships of War of Canada, Tenders for, &c.. 60
Skinners Cove, Pictou Co., N.S., Expenditures at.. 100
Soulanges and Vaudreuil, Names of Post Offices and Postmasters in Counties of. 62*t*
South Port Wharf, Lot 48, P. E. I., *re* repairs, contracts for same, &c.. .. .. 203*c*
Southwest, 36-16-27, W. 2, Documents in Department of Interior relating to, &c.. 187
Southwest ¼ of 4-9-14 West of 2nd Meridian.. .. .. 187*a*
Southwest ¼ 28-20-21, W. 2nd Meridian, N. W. H. B., also W. ½ of S. E. ¼, 32-20-21, W. 2. M., N. W. H. B., &c.. .. 187*g*
Southwest ¼ 2-19-20, W. 2nd Meridian Homestead, Pat. June 3, 1892, Papers connected with claim of G. W. Brown. 187*f*
South West Cove, Lunenburg Co., N.S., Obstructions placed in waters of.. .. 99
Spry Bay, Halifax Co., N.S., *re* establishment of Lobster Hatchery at.. .. 66
Spry Bay, Halifax Co., N.S., *re* closing of, or change of post office at.. .. .. 78*a*
Stahl, J., Assistant Inspector of Immigration on Ry., *re* suspension of by H. Boulay, &c.. 171
Stamp Vending Machines, terms of contract relating to, date, &c.. 224
Statistics of Canada, Official, Report of Departmental Commission on.. 77
Steamboat Inspection, Report of Chairman of Board of for fiscal year 1912. 23
Steamer *City of Sydney*, Investigation tion into collision between, and Tug *Douglas H. Thomas*.. .. .. 95*e*

S

Steam Service, &c., *re* subsidy to, between points in Bonaventure Co., Que. and New Brunswick.. .. .. 67a
Steam Service, &c., *re* subsidy to, between St. John, N.B., and Bear River, N.S.. 67
Steam Service performed by Steamer *Canada*, since Oct. 11, 1911, to date.. 65
Steam Service subsidized between Canadian Ports and British West Indies.. .. .. 67b
Steffanson, Mr. V., Correspondence with concerning Northern expeditions.. .. 161
Steffanson, Mr. V., Order in Council in reference to, &c.. .. .. 161a
Stewart, Sam., Hart Melvin, and others, prosecutions against for infringement of Fisheries Act.. .. .. 141b
Stenographers and Secretaries, Return *re* number, names of, and Members of Commons for whom they work.. .. 150
Stream Measurements for calendar year, 1911, Report of progress of.. .. .. .. 25d
Subsidies paid to Quebec and Oriental Ry. and others since October, 1911.. .. 67c
Subsidies paid each of four original Provinces of Dominion at Confederation, population on which same was based, &c.. 154
St. Peters, N.S., Acquisition or expropriation of land at.. 104
St. Peters Indian Reserve, Man., relating to delay in issuing patents for lands purchased from.. 148
St. Peters Canal Improvements, *re* contract between Dept. and W. H. Weller, regarding.. 108
St. Peters Canal Improvements, *re* contract between Dept. and W. H. Weller, regarding.. .. .. 108a
St. Croix, Co. of Lotbiniere, Que., Construction of a wharf at.. .. .. 203b
St. Joseph de Lévis, *re* suitable site for construction of Dry Dock at, &c.. .. 204
St. Vincent de Paul Penitentiary, documents *re* appointment of Dr. Pomminville at.. .. .. 72a
St. Anne de la Pocatière, Experimental Farm at, appointment of Mr. J. Begin as manager at.. .. .. 72e
St. John and Quebec Ry., documents, &c., between Dept. of Rys. and Canals *re* line from St. John, N.B., to Grand Falls.. .. .. 116b

S

St. Germain de Kamouraska, documents *re* purchase of timber for construction of wharf at, in 1912.. .. .. 203g
St. Denis, Albert, *re* issuing of Half Breed Scrip to, &c.. 231

T

Taché, C. E., Resident Engineer in Bonaventure Co., Que., *re* Reports made by on Public Works there since 1911.. 176
Tariff Duties on imported lumber, dressed on one side, &c., *re* arguments respecting before Exchequer Court of Canada.. .. .. 125b
Tariff Customs of Canada, changes made in by Order in Council since last session of Parliament.. 73
Tariff Customs on Cement, correspondence between Companies, Corporations, &c., to Nov. 11, 1911.. 125
Tariff Customs on Cement, adjustment of Duty on, and all correspondence with Ministers respecting, &c.. .. .. 125a
Taxation per capita for year ending March 31, 1913, and for each of 12 preceding years, Return *re*.. 227
Technical Education and Industrial Training, Report of Royal Commission on, &c.. .. .. 191d
Telegraph Lines under construction during year 1911-12, in different points in Nova Scotia.. 209
Tenders for Ships of War of Canada.. 60
Three Rivers, Que., Correspondence, &c., *re* erection of a Public Building at since Oct. 11, 1911, to date.. 207
Thibault, Firmin, of St. Denis, Co. of Kamouraska, Que., *re* petition for indemnity.. 122
Tides and Currents of Northumberland Strait, Reports in connection with.. 86
Townships 24-25, Range 27, West of first Meridian, suitability of for Forest Reserve, Homesteading purposes, &c.... 192a
Topographical Surveys Branch, Dept. of Interior, Report of, 1911, 1912.. .. .. 25b
Trade, Volume of, import and export of, between Canada and Newfoundland, from Jan. 1, 1896, to Jan. 1, 1913.. .. 195
Trade, Volume of, between Newfoundland and West Indies, included in Trade Arrangement with Canada, for 1909, 1910, 1911 and 1912 (Supplementary).. .. .. 195a

T

Trade Transactions between West Indies and Canada.. 59
Trade Unions, An Act respecting.. .. 54
Trade and Commerce:—
(Part I.—Canadian Trade, Imports and Exports) 10
(Part II.—Canadian Trade)—
France.. .. .. 10*a*
Germany.. .. .. 10*a*
United States.. .. .. 10*a*
United Kingdom.. .. .. 10*a*
(Part III.—Canadian Trade, except)—
France.. .. .. 10*b*
Germany.. .. .. 10*b*
United Kingdom.. .. .. 10*b*
United States.. .. .. 10*b*
(Part IV.—Miscellaneous Information)—
(Part V.—Report of the Board of Grain Commissioners for Canada). 10*d*
(Part VI.—Subsidized Steamship Services).. .. .. 10*e*
(Part VII.—Trade of Foreign Countries, Treaties and Conventions).... 10*f*
Telephone Statistics.. .. .. 20*d*
Telegraph Statistics.. .. .. 20*f*
Transcontinental Commission, Copy of letter of Engineer Lumsden of, to Chairman Wade of.. .. .. 106*a*
Transcontinental Railway, Copy of original instructions furnished engineers by Chief Engineer on Eastern Div. of, also Western.. 106
Transcontinental Railway Commissioners, Report of for 1912.. 37
Trawlers, Steam, prohibited from participating in Fishing Bounty, &c....162
Treasury Board Overrulings (Statement of).. 40
Twine for fishing purposes, duty payable on, under item 682 of Customs Tariff. 69

U

Unclaimed Balances, &c., in Chartered Banks of Dominion of Canada.. 7
United Shoe Machinery Co., Report of Commission to investigate complaints against.. .. .. 95*c*

V

Vale Road Ry., asking that line be taken over by I. C. Ry.. 109
Veterinary Director General.. .. .. .. 15*b*
Veterinary Director General, correspondence *re* requested visit to Nova Scotia.. 216
Volume of trade, import and export, between Canada and Newfoundland, from Jan. 1, 1896 to Jan. 1, 1913.. 195
Volume of trade between Newfoundland and West Indies, included in trade agreement with Canada, for 1909, 1910, 1911, 1912.. .. .. 195*a*

W

Warburton, Lt. Col., appointment of as Medical Officer at Charlottetown Camp.. .. .. 72*d*
Warrants, Governor General's, Statement of.. 43
Weir Licenses, Documents *re*, in waters of Counties of Charlotte and St. John, N.B.. 220
Welland Canal, number of accidents to lock gates or bridges on, during year ending Nov. 25, 1912, &c.. 169
Weller, W. H., contract between Dept. of Railways and, *re* St. Peters Canal. 108
Welsh Coal supply, Contract for to the various public buildings at Montreal. 134
West Indies-Canada Conference.. 55
West Indies, Trade Transactions between Canada, and.. 59
West Indies Trade Statistics, Imports and Exports, relating to, in possession of Govt.. .. .. 59*a*
West Indies, Documents in Dept. Trade and Commerce *re* Steamship Service between Canada and, since Dec. 1, 1912.. 222
White Bear Indian Reserve, Documents *re* surrender of part of, &c.. .. .. .. 159*c*
Wholesale Prices in Canada, Report on by R. H. Coats, B. A., Dept. of Labour.. 183

Y

Yukon, (Ordinances of), 1912.. 51
Yukon, (Ordinances of), 1913.. 226

See also Alphabetical List, Page 1.

LIST OF SESSIONAL PAPERS

Arranged in Numerical Order, with their titles at full length; the dates when Ordered and when presented to the Houses of Parliament; the Names of the Senator or Member who moved for each Sessional Paper, and whether it is ordered to be Printed or Not Printed.

CONTENTS OF VOLUME B.

Fifth Census of Canada, 1911—Population, Religions, Origins, Birthplace, Citizenship, Literacy, Infirmities, as enumerated in June, 1911.
Printed for distribution and sessional papers.

CONTENTS OF VOLUME C.

Fifth Census of Canada, 1911—Manufactures for 1910 as enumerated in June, 1911.
Printed for distribution and sessional papers.

CONTENTS OF VOLUME 1.

(This volume is bound in three parts.)

1. Report of the Auditor General for the year ended 31st March, 1912 Volume 1, Parts A to J. Volume II, Parts K to U. Volume III, Parts V to Y. Presented by Hon. Mr. White, 14th January, 1913.
Printed for distribution and sessional papers.

CONTENTS OF VOLUME 2.

2. The Public Accounts of Canada, for the fiscal year ended 31st March, 1912. Presented by Hon. Mr. White, 26th November, 1912.
Printed for distribution and sessional papers.

3. Estimates of sums required for the service of the Dominion for the year ending 31st March, 1914. Presented by Hon. Mr. White, 3rd February, 1913.
Printed for distribution and sessional papers.

4. Supplementary Estimates of sums required for the service of the Dominion for the year ending on the 31st March, 1913. Presented by Hon. Mr. White, 10th March, 1913.
Printed for distribution and sessional papers.

5. Supplementary Estimates of sums required for the service of the Dominion for the year ending on 31st March, 1914. Presented by Hon. Mr. White, 20th May, 1913.
Printed for distribution and sessional papers.

CONTENTS OF VOLUME 3.

6. List of Shareholders in the Chartered Banks of the Dominion of Canada as on December 31, 1911. Presented by Hon. Mr. White, 26th November, 1912.
Printed for distribution and sessional papers.

CONTENTS OF VOLUME 4.

7. Report on dividends remaining unpaid, unclaimed balances and unpaid drafts and bills of exchange in Chartered Banks of the Dominion of Canada, for five years and upwards prior to 31st December, 1911. Presented by Hon. Mr. White, 26th November, 1912.
Printed for distribution and sessional papers

CONTENTS OF VOLUME 5.

(This volume is bound in two parts).

8. Report of the Superintendent of Insurance for year ended 1912. Presented by Hon. Mr. White.. .. ..*Printed for distribution nd sessional papers.*

9. Abstract of Statements of Insurance Companies in Canada for the year ended 1912. Presented by Hon. Mr. White.. .. .. ..*Printed for distribution and sessional papers.*

CONTENTS OF VOLUME 6.

(This volume is bound in two parts).

10. Report of the Department of Trade and Commerce for the fiscal year ended 31st March, 1912. (Part I.—Canadian Trade). Presented by Hon. Mr. Foster, 30th January, 1913. *Printed for distribution and sessional papers.*

10a. Report of the Department of Trade and Commerce, for the year ended 31st March, 1912. (Part II.—Canadian Trade with (1) France, (2) Germany, (3) United Kingdom, and (4) United States). Presented by Hon. Mr. Foster, 12th December, 1912. *Printed for distribution and sessional papers*

10b. Report of the Department of Trade and Commerce for the fiscal year ended 31st March, 1912. (Part III.—Canadian Trade with Foreign Countries, except France, Germany, the United Kingdom and United States). Presented by Hon. Mr. Foster, 15th January, 1913.. .. ..*Printed for distribution and sessional papers.*

10c. Report of the Department of Trade and Commerce, for the fiscal year ended 31st March, 1912. (Part IV.—Miscellaneous Information). Presented by Hon. Mr. Reid, 17th February, 1913.. ... .*Printed for distribution and sessional papers.*

10d. Report of the Board of Grain Commisioners for Canada. Presented by Hon. Mr. Foster, 3rd February, 1913.. .. ..*Printed for distribution and sessional papers.*

10e. Report of the Department of Trade and Commerce for the fiscal year ended 31st March 1912. (Part VI.—Subsidized Steamship Services). Presented, 1913. *Printed for distribution and sessional papers.*

10f. Report of Trade and Commerce for fiscal year ended 31st March, 1912. (Part VII.—Trade of Foreign Countries, Treaties and Conventions). Presented, 1913. *Printed for distribution and sessional papers*

CONTENTS OF VOLUME 7.

11. Report of the Department of Customs for the year ended 31st March, 1912. Presented by Hon. Mr. Reid, 28th November, 1912—*Printed for distribution and sessional papers,*

CONTENTS OF VOLUME 8.

12. Reports, Returns and Statistics of the Inland Revenues for the Dominion of Canada for the year ended 31st March, 1912. (Part I.—Excise). Presented by Hon. Mr. Nantel, 25th November, 1912.. .. .. ..*Printed for distribution and sessional papers*

13. Report of the Department of Inland Revenue for year ended 31st March, 1912. (Part II.—Inspection of Weights and Measures, Gas and Electricity). Presented by Hon. Mr. Nantel, 25th November, 1912.. .. ..*Printed for distribution and sessional papers.*

14. Report of the Department of Inland Revenue for year ended 31st March, 1912. (Part III.—Adulteration of Food). Presented by Hon. Mr. Nantel, 25th November, 1912. *Printed for distribution and sessional papers.*

CONTENTS OF VOLUME 8—*Continued.*

15. Report of the Minister of Agriculture for the Dominion of Canada, for the year ended 31st March, 1912. Presented by Hon. Mr. Burrell, 26th November, 1912.
Printed for distribution and sessional papers.

15*a*. Report of the Dairy and Cold Storage Commissioner for the fiscal year ending 1912. Presented, 1913.. .. ..*Printed for distribution and sessional papers*

CONTENTS OF VOLUME 9.

15*b*. Report of the Veterinary Director General and Live Stock Commisioner, for the year ending 31st March, 1912. Presented by Hon. Mr. Burrell, 25th March, 1913.
Printed for distribution and sessional papers.

16. Report of the Director and Officers of the Experimental Farms for the year ending 31st March, 1912. Presented by Hon. Mr. Burrell, 14th January, 1913.
Printed for distribution and sessional papers.

CONTENTS OF VOLUME 10.

17. Criminal Statistics for the year ended 30th September, 1911, (Appendix of the Report of the Minister of Agriculture, for the year 1911). Presented by Hon. Mr. Borden, 2nd June, 1913... .. ..*Printed for distribution and sessional papers.*

18. Return of the Twelfth General Election for the House of Commons of Canada, held on the 14th and 21st of September, 1911. Presented by Hon. The Speaker, 27th November, 1912.. .. ..*Printed for distribution and sessional papers.*

18*a*. Return of By-Elections (Twelfth Parliament) for the House of Commons of Canada, held during the year 1912. Presented by Hon. The Speaker, 10th March, 1913.
Printed for distribution and sessional papers.

CONTENTS OF VOLUME 11.

19. Report of the Minister of Public Works on the works under his control for the fiscal period ended 31st March, 1912. Part I. Presented by Hon. Mr. Rogers, 4th December, 1912. Part II. Ottawa River Storage and Geodetic Levelling.
Printed for distribution and sessional papers.

CONTENTS OF VOLUME 12.

(This volume is bound in two parts).

19*a*. Report of the Commission on International Waterways.
Printed for distribution and sessional papers.

CONTENTS OF VOLUME 13.

20. Report of the Department of Railways and Canals, for the fiscal period from 1st April, 1911, to 31st March 1912. Presented by Hon. Mr. Cochrane, 13th December, 1912.
Printed for distribution and sessional papers.

20*a*. Canal Statistics for the season of Navigation, 1912. Presented by Hon. Mr. Cochrane, 15th April, 1913.. .. ..*Printed for distribution and sessional papers.*

20*b*. Railway Statistics of the Dominion of Canada for the year ended 30th June, 1912. Presented by Hon. Mr. Cochrane, 16th January, 1913.
Printed for distribution and sessional papers.

CONTENTS OF VOLUME 14.

20c. Seventh Report of the Board of Railway Commissioners for Canada, for the year ending 31st March, 1912. Presented by Hon. Mr. Cochrane, 25th November, 1913.
Printed for distribution and sessional papers.

20d. Telephone Statistics of the Dominion of Canada, for the year ended 30th June, 1912. Presented by Hon. Mr. Cochrane, 17th February, 1913.
Printed for distribution and sessional papers

20e. Express Statistics of the Dominion of Canada, for the year ended 30th June, 1912. Presented by Hon. Mr. Cochrane, 12th February, 1913.
Printed for distribution and sessional papers.

20f. Telegraph Statistics of the Dominion of Canada, for the year ended 30th June, 1912. Presented by Hon. Mr. Cochrane, 7th February, 1913.
Printed for distribution and sessional papers.

CONTENTS OF VOLUME 15.

21. Forty-fifth Annual Report of the Department of Marine and Fisheries, for the fiscal year 1911-1912—Marine. Presented by Hon. Mr. Hazen, 16th December, 1912.
Printed for distribution and sessional papers.

21a. Eleventh Report of the Geographic Board of Canada, for the year ending 30th June, 1912. Presented by Hon. Mr. Hazen, 11th April, 1913.
Printed for distribution and sessional papers.

CONTENTS OF VOLUME 16.

21b. List of Shipping issued by Department of Marine and Fisheries. Vessels in Registry Books of Canada, for year 1912. Presented, 1913.
Printed for distribution and sessional papers

21c. Supplement to Forty-fifth Report of the Department of Marine and Fisheries, for fiscal year 1911-12,—Marine Branch—Influence of Icebergs and Land on the temperature of the Sea. Presented by Hon. Mr. Hazen, 17th February, 1913.
Printed for distribution and sessional papers.

22. Forty-fifth Annual Report of the Department of Marine and Fisheries, 1912,—Fisheries. Presented by Hon. Mr. Hazen, 5th December, 1912.
Printed for distribution and sessional papers

23. Report of the Chairman of the Board of Steamboat Inspection for the fiscal year 1912.
Printed for distribution and sessional papers.

CONTENTS OF VOLUME 17.

24. Report of the Postmaster General, for the year ended 31st March, 1912. Presented by Hon. Mr. Pelletier, 3rd December, 1912..*Printed for distribution and sessional papers.*

CONTENTS OF VOLUME 18.

25. Annual Report of the Department of the Interior, for the fiscal year ending 31st March, 1912. Presented by Hon. Mr. Roche, 27th November, 1912.
Printed for distribution and sessional papers.

CONTENTS OF VOLUME 19.

25*a*. Report of Chief Astronomer, Department of the Interior, for year ending 31st March, 1911.. .. ..*Printed for distribution and sessional papers.*

25*b*. Annual Report of the Topographical Surveys Branch of the Department of the Interior, 1911-1912. Presented by Hon. Mr. Crothers, 6th June, 1913.
Printed for distribution and sessional papers

CONTENTS OF VOLUME 20.

25*d*. Report of progress of Stream Measurements for calendar year 1911.
Printed for distribution and sessional papers.

26. Summary Report of the Geological Survey Branch of the Department of Mines, for the calendar year 1912. Presented by Hon. Mr. Roche, 29th November, 1912.
Printed for distribution and sessional papers.

26*a*. Summary Report of the Mines Branch, Department of Mines, for the calendar year 1911.. .. ..*Printed for distribution and sessional papers.*

CONTENTS OF VOLUME 21.

27. Report of the Department of Indian Affairs for the year ended 31st March, 1912. Presented by Hon. Mr. Roche, 29th November, 1912.
Printed for distribution and sessional papers.

28. Report of the Royal Northwest Mounted Police, 1912. Presented by Hon. Mr. Borden, 14th January, 1913... .. ..*Printed for distribution and sessional papers.*

CONTENTS OF VOLUME 22.

29. Report of the Secretary of State of Canada for the year ended 31st March, 1912. Presented by Hon. Mr. Coderre, 3rd December, 1912.
Printed for distribution and sessional papers.

29*a*. Report of the Secretary of State for External Affairs for the year ended 31st March. 1912. Presented by Hon. Mr. Borden, 25th November, 1912.
Printed for distribution and sessional papers.

CONTENTS OF VOLUME 23.

29*b*. Report of the work of the Archives Branch of the Department of the Secretary of State, for the year 1912. Presented by Hon. Mr. Coderre, 2nd June, 1913.
Printed for distribution and sessional papers.

30. The Civil Service List of Canada, 1912. Presented by Hon. Mr. Coderre, 3rd December, 1912.. .. ..*Printed for distribution and sessional papers.*

31. Fourth Annual Report of the Civil Service Commission of Canada for the period from 1st September, 1911, to 31st August, 1912. Presented by Hon. Mr. Coderre, 24th January, 1913.. .. ..*Printed for distribution and sessional papers.*

CONTENTS OF VOLUME 24.

32. Annual Report of the Department of Public Printing and Stationery, for the fiscal year ended 31st March, 1912. Presented by Hon. Mr. Borden, 24th April, 1913.
Printed for distribution and sessional papers.

CONTENTS OF VOLUME 24—*Continued.*

33. Report of the Joint Librarians of Parliament for year 1912. Presented by Hon. The Speaker, 31st November, 1912... .. ..*Not printed*

34. Report of the Minister of Justice as to Penitentiaries of Canada, for the fiscal year ended 31st March, 1912. Presented by Hon. Mr. Doherty, 27th November, 1912.
Printed for distribution and sessional papers.

35. Report of the Militia Council for the fiscal year ending 31st March, 1913. Presented by Hon. Mr. Hughes, 14th January, 1913. ..*Printed for distribution and sessional papers.*

36. Report of the Department of Labour for the fiscal year ending 31st March, 1912. Presented by Hon. Mr. Crothers, 28th November, 1912.
Printed for distribution and sessional papers.

36*a*. Fifth Report of the Registrar of Boards of Conciliation and Investigation of the proceedings under "The Industrial Disputes Investigation Act, 1907," for the fiscal year ending 31st March, 1912. Presented by Hon. Mr. Crothers, 28th November, 1912.
Printed for distribution and sessional papers

36*c*. Report of proceedings under the Combines Investigation Act, for the year ended 31st March, 1912... .. ..*Printed for distribution and sessional papers.*

CONTENTS OF VOLUME 25.

37. Eighth Annual Report of the Commissioners of the Transcontinental railway, for the year ended 31st March, 1912. Presented by Hon. Mr. Cochrane, 12th December, 1912.
Printed for distribution and sessional papers.

38. Report of the Department of the Naval Service, for the fiscal year ending 31st March, 1912. Presented by Hon. Mr. Hazen, 28th November, 1912.
Printed for distribution and sessional papers.

39. "Miscellaneous Unforeseen Expenses," from the 1st April, to the 21st November, 1912, in accordance with the Appropriation Act of 1912. Presented by Hon. Mr. White, 25th November, 1912... .. ..*Not printed*

40. Statement of Treasury Board over-rulings, under Section 44, Consolidated Revenue and Audit Act. Presented by Hon. Mr. White, 26th November, 1912... .. ..*Not printed.*

41. Statement in pursuance of Section 17 of the Civil Service Insurance Act, for the year ending 31st March, 1912. Presented by Hon. Mr. White, 26th November, 1912.
Not printed.

42. Statement of Receipts and Expenditures of the Ottawa Improvement Commission to 31st March, 1912. Presented by Hon. Mr. White, 26th November, 1912.....*Not printed.*

43. Statement of Governor General's Warrants issued since the last Session of Parliament on account of 1912-13. Presented by Hon. Mr. White, 26th November, 1912.
Not printed.

44. Statement of Superannuation and Retiring Allowances in the Civil Service during the year ending 31st December, 1912, showing name, rank, salary, service, allowance and cause of retirement of each person superannuated or retired, also whether vacancy is filled by promotion or by appointment, and salary of any new appointee. Presented by Hon. Mr. White, 26th November, 1912.. .. ..*Not printed*

CONTENTS OF VOLUME 25—*Continued.*

45. Return (in so far as the Department of the Interior is concerned) of copies of all Orders in Council, plans, papers and correspondence relating to the Canadian Pacific railway, which are required to be presented to the House of Commons, under a Resolution passed on 20th February, 1882, since the date of the last return, under such Resolution. Presented by Hon. Mr. Roche, 26th November, 1912.. .. .. ..*Not printed.*

45*a*. Return to lands sold by the Canadian Pacific Railway Company during the year which ended on the 1st October, 1912. Presented by Hon. Mr. Roche, 14th January, 1913.. .. ..*Not printed.*

45*b*. Return to an Address to His Royal Highness the Governor General of the 27th January, 1913, for a copy of all applications made by the Canadian Pacific Railway Company for authorization to make new issue of stock, addressed to the Governor in Council, and of all correspondence with regard to the same. Presented 16th April, 1913, by Sir Wilfrid Laurier.. .. ..*Not printed*

46. Return to an Order of the House of the 18th March, 1912, for a copy of all reports made by the Inspector of Agents for placing Immigrants, both domestic servants and farm labourers, in Ontario and Quebec, during the years 1910 and 1911. Presented 27th November, 1912, by Mr. Sutherland.. .. ..*Not printed.*

47. Return to an Order of the House of the 11th March, 1912, for a copy of all letters, telegrams and other papers in connection with complaints of whatever nature against Commission Agents for placing farm labourers in Ontario, also officials connected with any agency in Ontario, during the year 1910 and 1911. Presented 27th November, 1912 by Mr. Sutherland.. .. ..*Not printed*

48. Copy of Order in Council No. P. C. 1275, dated 13th May, 1912, "Award of compensation to men belonging to the Royal Canadian Navy, who may be permanently disabled though injuries or illness contracted during drill, training or on duty." Presented by Hon. Mr. Hazen, 27th November, 1912.. .. ..*Not printed.*

48*a*. Copies of plans included in the tender of Messrs. Cammel, Laird & Company, dated 29th April 1911, for the construction of ships for the Canadian Naval Service. Presented by Hon. Mr. Hazen, 18th December, 1912.. .. ..*Not printed.*

48*b*. An Act respecting the Naval Service of Canada." (Copy of Order in Council, No. P. C. 126 dated 20th January, 1913, "Amendment to the Regulations for the Entry of Naval Cadets)." Presented by Hon. Mr. Hazen, 4th February, 1913.. ..*Not printed.*

49. Regulations under "The Destructive Insect and Pest Act." Presented by Hon. Mr. Burrell, 28th November, 1912.. .. ..*Not printed.*

50. Statement of the affairs of the Royal Society of Canada, for the year ended 30th April. 1912. Presented by Hon. Mr. White, 29th November, 1912.. .. ..*Not printed.*

51. Ordinances of the Yukon Territory passed by the Yukon Council in the year 1912. Presented by Hon. Mr. Coderre, 3rd December, 1913.. .. ..*Not printed*

52. Return of Orders in Council which have been published in the *Canada Gazette,* between 1st August, 1911, and 30th September, 1912, in accordance with the provisions of Section 77 of the Dominion Lands Act, Chapter 20 of the Statutes of Canada, 1908. Presented by Hon. Mr. Roche, 5th December, 1912.. .. ..*Not printed.*

CONTENTS OF VOLUME 25—*Continued.*

52*a*. Return of Orders in Council passed between the 1st August, 1911, and 30th September, 1912, in accordance with the provisions of Section 5 of the Dominion Land Survey Act, Chapter 21, 7-8 Edward VII. Presented 5th December, 1912, by Hon. Mr. Roche. *Not printed.*

52*b*. Return of Orders in Council which have been passed and published in the *Canada Gazette* and in the British Columbia *Gazette*, between 1st August, 1911, and 30th September, 1912, in accordance with provisions of Subsection (*d*) of Section 38 of the regulations for the survey, administration, disposal and management of Dominion Lands within the 40-mile Railway Belt in the Province of British Columbia. Presented by Hon. Mr. Roche, 5th December, 1912.. .. ..*Not printed*

52*c*. Return to an Order of the House of the 24th February, 1913, for a copy of all regulations issued by the Minister of the Interior, relating to the disposition of Dominion lands between 8th April, 1905, and 12th October, 1911. Presented by Hon. Mr. Roche, 25th March, 1913.. .. ..*Not printed.*

53. A detailed statement of all bonds or securities registered in the Department of the Secretary of State of Canada, since last return (28th November, 1911) submitted to the Parliament of Canada under Section 32 of Chapter 19, of the Revised Statutes of Canada, 1906. Presented by Hon. Mr. Coderre, 4th December, 1912.. .. ..*Not printed.*

54. Annual Return respecting Trade Unions under Chapter 125, R.S.C., 1906. Presented by Hon. Mr. Coderre, 4th December, 1912... .. ..*Not printed.*

55. Deliberation of the Canada-West Indies Conference, and Agreement between Canada and certain of the West India Colonies. Presented by Hon. Mr. Foster, 4th December, 1912.. .. ..*Printed for distribution and sessional papers*

56. Orders in Council passed between the 1st August, 1911, and 30th September, 1912, in accordance with the provisions of the Rocky Mountains Park Act, Chapter 60, Revised Statutes of Canada, 1906. Presented by Hon. Mr. Rogers, 4th December, 1912. *Not printed.*

56*a*. Return of Orders in Council passed between the 1st August, 1911, and 30th September, 1912, in accordance with the provisions of the Forest Reserves and Park Act, Section 19, of Chapter 10, 1-2 George V. Presented by Hon. Mr. Roche, 5th December, 1912. *Not printed.*

CONTENTS OF VOLUME 26.

57. Report of the Public Service Commission. Presented by Hon. Mr. Borden, 9th December, 1912. Parts I, II, and III.. .. .. ..*Printed for distribution and sessional papers.*

CONTENTS OF VOLUME 27.

(This volume is bound in two parts).

57*a*. Report on the organization of the Public Service of Canada, by Sir George Murray. Presented by Hon. Mr. Borden, 18th December, 1912. *Printed for distribution and sessional papers.*

58. Report of the proceedings for the preceding year of the Commissioners of Internal Economy of the House of Commons, pursuant to Rule 9. Presented by Hon. The Speaker, 9th December, 1912.. .. ..*Not printed.*

59. Schedules of Trade Transactions between the West Indies and Canada, the United States and the United Kingdom, compiled from the West Indian blue books and statistics. Presented by Hon. Mr. Foster, 12th December, 1912. *Printed for distribution and sessional papers.*

CONTENTS OF VOLUME 27—*Continued.*

59*a*. Trade Statistics of Imports and Exports in possession of the Government, *re* British West Indies. (*Senate*).. .. ..*Not printed.*

60. Return showing correspondence concerning the calling for tenders for the Ships of War of Canada, together with copies of tenders. Presented by Hon. Mr. Hazen, 12th December, 1912.. .. ..*Not printed.*

61. Return to an Order of the House of the 9th December, 1912, for a copy of all correspondence, telegrams, reports and documents relating to the dismissal of John R McDonald, Heatherton, Antigonish County, as Indian agent for the district including the Counties of Antigonish and Guysborough, and the appointment of his successor. Presented 4th January, 1913.—*Mr. Chisholm* (*Antigonish*).. .. ..*Not printed.*

61*a*. Return to an Order of the House of the 9th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Dr. C. P. Bissett, Physician to the Indians at Salmon River, Richmond County, N.S. Presented 14th January, 1913.—*Mr. Kyte*.. .. ..*Not printed.*

61*b*. Return to an Order of the House of the 9th December, 1912, for a copy of all charges. correspondence, letters, telegrams and other documents relating to the dismissal of Michael Murphy, postmaster at Point Micheau, Richmond County, N.S. Presented 4th January, 1913.—*Mr. Kyte*.. .. ..*Not printed.*

61*c*. Return to an Order of the House of the 9th December, 1912, for copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of David A. McLeod, Postmaster at Cleveland, Richmond County, N.S. Presented 14th January.—*Mr. Kyte*.. .. ..*Not printed.*

61*d*. Return to an Order of the House of the 4th December, 1912, for a copy of all papers. letters, complaints, telegrams, reports, and other documents in the possession of the Post Office Department relating to the dismissal of John Milward, Postmaster at Stormont, Guysborough County, N.S. Presented 14th January, 1913.—*Mr. Sinclair.*
Not printed.

61*e*. Return to an Order of the House of the 9th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents, relating to the dismissal of Kenneth F. McAskill, Postmaster at Loch Lomond, Richmond County, N.S. Presented 14th January, 1913.—*Mr. Kyte*.. .. ..*Not printed.*

61*f*. Return to an Address to His Royal Highness the Governor General of the 25th March, 1912, for a copy of all letters, telegrams, memorandums and Orders in Council, relating to the dismissal of Mr. W. W. Hayden, late wharfinger of the government wharf at Digby, Nova Scotia. Presented 14th January, 1913.—*Mr. MacLean* (*Halifax*).
Not printed.

61*g*. Return to an Order of the House of the 11th December, 1912, for a copy of all complaints and charges made against W. B. Langley, assistant at Lobster Hatchery, Nova Scotia, and of all letters, telegrams and correspondence relating in any way to his dismissal and the appointment of a successor. Presented 14th January, 1913.—*Mr Sinclair*.. .. ..*Not printed.*

61*h*. Return to an Order of the House of the 11th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Fred. E. Cox, engineer lobster hatchery at Isaac's Harbour, Guysborough County, N.S., and of the evidence taken and report of investigation held by H. P. Duchemin in regard to the same. Presented 14th January, 1913.—*Mr. Sinclair*.. .. ..*Not printed.*

CONTENTS OF VOLUME 27—*Continued.*

61*i*. Return to an Order of the House of the 11th December, 1912, for a copy of all complaints and charges made against Simon Hodgson, engineer lobster hatchery at Isaac's Harbour, Nova Scotia, and of all letters, telegrams and correspondence relating in any way to his dismissal and the appointment of a successor. Presented 14th January 1913.—*Mr. Sinclair*.. .. ..*Not printed.*

61j. Return to an Order of the House of the 11th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Henry Henlow, chief engineer at lobster hatchery at Canso, Guysborough County, N.S. Presented 14th January, 1913.—*Mr. Sinclair*.. .. ..*Not printed.*

61*k*. Return to an Order of the House of the 11th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of H. C. V. LeVatte, harbour master at Louisburg, Cape Breton South, N.S., and of evidence taken and report of investigations held by H. P. Duchemin, in regard to the same. Presented 14th January, 1913.—*Mr. Carroll*.. .. ..*Not printed.*

61*l*. Return to an Order of the House of the 11th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of John Cummings, assistant at the lobster hatchery at Isaac's Harbour, Nova Scotia, and of evidence taken and reports of investigation held by H. P. Duchemin, in regard to the same. Presented 14th January, 1913.—*Mr. Sinclair*.. .. ..*Not printed.*

61*m*. Return to an Order of the House of the 9th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of W. G. Matthews, coxswain, lifeboat crew at Canso, Guysborough County, N.S., and all evidence taken and report of investigation held by H. P. Duchemin in regard to the same; also a detailed statement of the expenses of such investigation. Presented 14th January, 1913.—*Mr. Sinclair*.. .. ..*Not printed.*

61*n*. Return to an Order of the House of the 9th December, 1912, for a copy of all charges, correspondence, letters, telegrams, and other documents relating to the dismissal of Joseph Shean, harbour master at North Sydney, N.S., in the riding of North Cape Breton and Victoria. Presented 14th January, 1913.—*Mr. McKenzie*.. .. ..*Not printed.*

61*o*. Return to an Order of the House of the 9th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents, relating to the dismissal of George H. Sampson, keeper of the storm signal at Lower L'Ardoise, Richmond County, N.S. Presented 14th January, 1913.—*Mr. Kyte*.. .. ..*Not printed.*

61*p*. Return to an Order of the House of the 9th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Alexis Vigneau, captain of the patrol boat at Arichat, Richmond County, N.S. Presented 14th January, 1913.—*Mr. Kyte*.. .. ..*Not printed.*

61*q*. Return to an Address to His Royal Highness the Governor General of the 4th December, 1912, for a copy of all correspondence, Orders in Council and all other papers or documents in any way relating to the dismissal of Emeri Thivierge, from the position of fisheries inspector for the Counties of Prescott and Russell. Presented 14th January, 1913.—*Mr. Murphy*.. .. ..*Not printed.*

61*r*. Return to an Order of the House of the 9th December, 1912, for a return showing all the public officers of the Inland Revenue Department in the County of St. Jean Iberville, removed by the present Government since 1st May, 1912, together with the names and duties of such persons, the reasons of their dismissal, the nature of the

CONTENTS OF VOLUME 27—*Continued.*

complaints against them, the names of the persons who brought these complaints; also a copy of all correspondence relating thereto, and of the reports of inquiries in the cases where such have been held. Presented 14th January, 1913.—*Mr. Demers.* *Not printed.*

61s. Return to an Order of the House of the 4th December, 1912, for a copy of all correspondence, complaints, petitions, memoranda, notes of evidence, reports of investigations and other documents in the possession of the Department of Inland Revenue regarding the dismissal of J. Fabien Bugeaud, Bonaventure, Quebec, assistant inspector of weights and measures in the Quebec district, and the appointment of his successor or successors, with the names, residence, salaries and duties; also of all documents relating to A. B. Caldwell, New Carlisle, Quebec, joint assistant inspector with J. Fabien Bugeaud, and the duties assigned to him, together with a copy of all recommendations for said new appointment. Presented 14th January, 1913.—*Mr. Marcil (Bonaventure).. .. ..Not printed.*

61t. Return to an Address to His Royal Highness the Governor General of the 4th December, 1912, for a copy of all correspondence, Orders in Council and all other papers or documents in any way relating to the dismissal of Duncan McArthur, from the Annuities Branch, while the said branch was attached to the Department of Trade and Commerce. Presented 15th January, 1913.—*Mr. Murphy.. .. ..Not printed.*

61u. Return to an Order of the House of the 26th February, 1912, for a copy of all documents, letters, requests, reports, recommendations and evidence taken under investigation by Dr. Shentliff, relating to the dismissal of Charles O. Jones, postmaster of Bedford, County of Missisquoi. Presented 15th January, 1913.—*Mr. Kay.* *Not printed.*

61v. Return to an Order of the House of the 1st April, 1912, for a copy of all letters, telegrams, complaints or other papers or documents in the possession of the Government or any department thereof, relating to the dismissal of Archibald Barss, postmaster, New Harbour, West, Guysborough County, N.S. Presented 15th January, 1913.—*Mr. Sinclair.. .. ..Not printed.*

61w. Return to an Order of the House of the 10th December, 1912, for a copy of all correspondence, documents, recommendation and other reports respecting the dismissal of Dr. A. Allaire as surgeon of the penitentiary of St. Vincent de Paul, and also respecting the payments of his gratuities, superannuation or retiring allowance. Presented 15th January, 1913.—*Mr. Wilson (Laval).. .. ..Not printed*

61x. Return to an Order of the House of the 10th December, 1912, for a copy of all correspondence, documents, recommendations and reports respecting the dismissal of Oscar Beauchamp as warden of the penitentiary of St. Vincent de Paul, and also respecting the payments of his gratuities, superannuation or retiring allowance. Presented 15th January, 1913.—*Mr. Wilson (Laval).. .. ..Not printed.*

61y. Return to an Order of the House of the 9th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relative to the dismissal of John McDonald, freight handler and checker Intercolonial railway at Sydney Mines Nova Scotia, in the riding of North Cape Breton and Victoria, and of the evidence taken and report of investigation held by H. P. Duchemin, in regard to same, and a detailed statement of the expenses of such investigation. Presented 16th January, 1913.—*Mr. Mackenzie.. .. ..Not printed.*

61z. Return to an Order of the House of the 9th December, 1912, for a copy of all letters, correspondence, documents and reports relating to the dismissal of Allan Kinney, of Linwood, Antigonish County, Nova Scotia, a sectionman on the Intercolonial rail-

CONTENTS OF VOLUME 27—*Continued.*

way, and for a statement in detail of the expenses in connection with the investigation of the charges against him. Presented 16th January, 1913.—*Mr. Chisholm (Antigonish)*.. .. ..*Not printed.*

61*aa*. Return to an Order of the House of the 9th December, 1912, for a copy of all letters. correspondence, documents and reports relating to the dismissal of Charles Landry, of Pomket, Antigonish county, Nova Scotia, a sectionman on the Intercolonial railway, and for a statement in detail of the expenses connected with the investigation of the charges against him. Presented 16th January, 1913.—*Mr. Chisholm (Antiginish)*.. .. ..*Not printed.*

61*bb*. Return to an Order of the House of the 4th December, 1912, for a copy of all papers, documents, reports, correspondence, &c., relating to the dismissal of Patrick Decoste, an employee on the ferry steamer *Scotia* between Mulgrave and Point Tupper on the Intercolonial railway. Presented 16th January, 1913.. .. ..*Not printed.*

61*cc*. Return to an Order of the House of the 9th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Harry E. McDonald, assistant engineer at St. Peters Canal, Richmond County, N.S Presented 13th January, 1913.—*Mr. Kyte.*

61*dd*. Return to an order of the House of the 9th December, 1912, for a copy of all letters, papers, documents, telegrams, and charges relating to a complaint against Neil Ross sectionman on the Intercolonial railway at West River, County of Pictou, and of the evidence taken at the investigation, of the report of the commissioner thereon, and of all letters, papers or other documents relating to the appointment of his successor. Presented 16th January, 1913.—*Mr. Macdonald*.. .. ..*Not printed.*

61*ee*. Return to an Order of the House of the 9th December, 1912, for a copy of all letters. correspondence, documents and reports relating to the dismissal of James Armstrong. of Heatherton, Antigonish County, N.S., a sectionman on the Intercolonial railway, and for a statement in detail of the expenses connected with the investigation of the charges against him. Presented 16th January, 1913.—*Mr. Chisholm (Antigonish).* *Not printed.*

61*ff*. Return to an Order of the House of the 4th December, 1912, for a copy of all letters, telegrams and other documents, relating to the dismissal of Thomas J. Gray, as car inspector on the Intercolonial railway at Westville, County of Pictou. Presented 16th January, 1913.—*Mr. Macdonald*.. .. ..*Not printed.*

61*gg*. Return to an Order of the House of the 9th December, 1912, for a copy of all correspondence, telegrams and reports relating to the dismissal of Colin Macdonald, of James River Station, County of Antigonish, as Intercolonial sectionman, and the appointment of his successor. Presented 16th January, 1913.—*Mr. Chisholm (Antigonish)*.. .. ..*Not printed.*

61*hh*. Return to an Order of the House of the 9th December, 1912, for a copy of all charges, correspondence, letters, telegrams, and other documents relative to the dismissal of A. T. Gannon, car repairer and inspector Intercolonial railway at North Sydney, Nova Scotia, in the riding of North Cape Breton and Victoria, and of the evidence taken and report of investigation held by H. P. Duchemin, in regard to same, and a detailed statement of the expenses of such investigation. Presented 16th January. 1913.—*Mr. McKenzie*.. .. ..*Not printed.*

CONTENTS OF VOLUME 27—*Continued.*

61*ii*. Return to an Order of the House of the 9th December, 1912, for a copy of all letters, correspondence, documents, and reports relating to the dismissal of Huber Myatte, Tracadie, Antigonish County, Nova Scotia, a sectionman on the Intercolonial railway and for a statement in detail of the expenses connected with the investigation of the charges against him. Presented 16th January, 1913.—*Mr. Chisholm* (*Antigonish*). *Not printed.*

61*jj*. Return to an Order of the House of the 9th December, 1912, for a copy of all letters, correspondence, documents, and reports relating to the dismissal of John McDonnell, Afton Station, Antigonish County, Nova Scotia, a sectionman on the Intercolonial railway, and for a statement in detail of the expenses connected with the investigation of the charges against him. Presented 17th January, 1913.—*Mr. Chisholm* (*Antigonish*).. .. ..*Not printed.*

61*kk*. Return to an Order of the House of the 9th December, 1911, for a copy of all letters, correspondence, documents and reports relating to the dismissal of William Landry, of Pomket, Antigonish County, Nova Scotia, a section foreman of the Intercolonial railway, and for a statement in detail of the expenses connected with the investigation of the charges againt him. Presented 17th January, 1913.—*Mr. Chisholm* (*Antigonish*).. .. ..*Not printed.*

61*ll*. Return to an Order of the House of the 9th December, 1912, for a copy of all charges, correspondence, telegrams and other documents relative to the dismissal of D. J. McDougall, section foreman, Intercolonial railway, Grand Narrows, Nova Scotia, in the riding of North Cape Breton and Victoria, and of the evidence taken and report of investigation held by H. P. Duchemin, in regard to same, and a detailed statement of the expenses of such investigation. Presented 17th January, 1913.—*Mr. McKenzie.* *Not printed.*

61*mm*. Return to an Order of the House of the 11th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Dan. A. Coffey, lockman at St. Peter's canal, Richmond County, N.S., and of the evidence taken and of the reports of investigation held by H. P. Duchemin, in regard to the same, and a detailed statement of the expenses of such investigation; and a copy of all papers relating to the appointment of his successor. Also, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of W. A. McNeil, lockman at St. Peter's canal, Richmond County, N.S., and of the evidence taken and of the report of investigation held by H. P. Duchemin in regard to the same, and a detailed statement of the expenses of such investigation; and a copy of all papers relating to the appointment of his successor. Presented 17th January, 1913.—*Mr. Kyte*.. .. ..*Not printed.*

61*nn*. Return to an Order of the House of the 9th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of John P. Meagher, foreman deckhand on steamship *Scotia*, Mulgrave, Guysborough County, N.S., and of all evidence taken and reports of investigation held by H. P. Duchemin, in regard to the same; also a detailed statement of the expenses of such investigation. Presented 17th January, 1913.—*Mr. Sinclair*.. .. .. ..*Not printed.*

61*oo*. Return to an Order of the House of the 4th December, 1912, for a copy of all letters, telegrams, evidence taken, reports, &c., and of all correspondence between the Postmaster General and officers of his department, and James Gibson, ex-postmaster of Alameda, Sask., in connection with the instructions sent him to hand the office over to E. Cronk. Presented 17th January, 1913.—*Mr. Turriff*.. .. ..*Not printed.*

61*pp*. Return to an Order of the House of the 11th December, 1912, for a copy of all papers, documents and correspondence relating to the dismissal of Captain C. E. Miller from the 75th Regiment. Presented 17th January, 1913.—*Mr. Maclean* (*Halifax*). *Not printed.*

CONTENTS OF VOLUME 27—*Continued.*

61*qq*. Return to an Order of the House of the 9th December, 1912, for a copy of all correspondence, letters and telegrams relating to the dismissal of J. N. N. Poirier, collector of excise at Victoriaville, Quebec, and also of the inquiry made by N. Garceau, by the Minister of Inland Revenue, and especially of two affidavits given by Ludger Frechette and Joseph Faucher. Presented 17th January, 1913.—*Mr. Brouillard.* *Not printed.*

61*rr*. Return to an Order of the House of the 9th December, 1912, for a copy of all charges, correspondence, letters, telegrams, and other documents relative to the dismissal of Abraham Astephen, of North Sydney, N.S., interpreter Immigration Department at North Sydney, N.S., in the riding of North Cape Breton and Victoria. Presented 17th January, 1913.—*Mr. McKenzie.. .. ..Not printed.*

61*ss*. Return to an Address to His Royal Highness the Governor General of the 4th December, 1912, for a copy of all correspondence, Orders in Council, and all other papers or documents in any way relating to the dismissal of Robert Dow from the Immigration Branch of the Department of the Interior at Ottawa. Presented 17th January, 1913. —*Mr. Murphy.. .. ..Not printed.*

61*tt*. Return to an Order of the House of the 9th December, 1912, for a copy of all papers, documents, correspondence, &c., relating to the dismissal of John Ware of the Immigration Branch of the Interior Department at Halifax, N.S. Presented 17th January, 1913.—*Mr. Maclean (Halifax).. .. ..Not printed.*

61*uu*. Return to an Order of the House of the 9th December, 1912, for a copy of all charges correspondence, letters, telegrams, and other documents relative to the dismissal of Richard Hickey, agent Immigration Department at North Sydney, Nova Scotia, in the riding of North Cape Breton and Victoria, and of the evidence taken and report of investigation held by H. P. Duchemin, in regard to the same, and a detailed statement of the expenses of such investigation. Presented 17th January, 1913.—*Mr. McKenzie.. .. ..Not printed.*

61*vv*. Return to an Order of the House of the 9th December, 1912, for a copy of all charges correspondence, letters, telegrams, and other documents relative to the dismissal of Dr. J. W. McLean, of North Sydney, N.S., medical examiner, Immigration Department at North Sydney, N.S., in the riding of North Cape Breton and Victoria. Presented 17th January, 1913.—*Mr. McKenzie.. .. ..Not printed.*

61*ww*. Return to an Order of the House of the 11th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of John A. McRea, lightkeeper, at Margaree Island, Inverness County, Nova Scotia, of the evidence taken and report of investigation held by H. P. Duchemin in regard to the same; also a detailed statement of the expenses of such investigation. Presented 17th January, 1913.—*Mr. Chisholm (Inverness).. .. .. ..Not printed.*

61*xx*. Return to an Order of the House of the 9th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Thomas Brymer, lightkeeper at Lower L'Ardoise, Richmond County, N.S. Presented 17th January, 1913.—*Mr. Kyte.. .. ..Not printed.*

61*yy*. Return to an Order of the House of the 9th December, 1912, for a copy of all charges correspondence, letters, telegrams and other documents relating to the dismissal of Dominique Boudrot, buoy contractor, at Petit de Grat, Richmond County, N.S. Presented 17th January, 1913.—*Mr. Kyte.. .. ..Not printed.*

CONTENTS OF VOLUME 27—*Continued.*

61*zz*. Return to an Order of the House of the 4th December, 1912, for a copy of all charges correspondence, letters, telegrams and other documents concerning the dismissal of Frederick F. Doucet, keeper of the lighthouse at the entrance of the harbour of Caraquet, County of Gloucester, and the nomination of his successor. Presented 17th January, 1913.—*Mr. Turgeon*.. .. ..*Not printed.*

61*aaa*. Return to an Order of the House of the 11th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of W. H. Henlow, keeper of storm drum, Liscomb, Guysborough County, N.S. Presented 17th January, 1913.—*Mr. Sinclair*.. .. ..*Not printed.*

61*bbb*. Return to an Order of the House of the 4th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of David Falconer, lightkeeper at Cariboo Island, County of Pictou. Presented 17th January, 1913.—*Mr. Macdonald*.. .. ..*Not printed.*

61*bbb*. Return to an Order of the House of the 4th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relative to the dismissal of M. Wilson Lawlor, harbour commissioner at North Sydney, Nova Scotia, in the riding of North Cape Breton and Victoria, and of the evidence taken and report of investigation held by H. P. Duchemin, in regard to same, and a detailed statement of the expenses of such investigation. Presented 17th January, 1913.—*Mr. McKenzie.*
Not printed.

61*ddd*. Return to an Order of the House of the 9th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relative to the dismissal of P. J. McDonald, harbour commissioner at North Sydney, Nova Scotia, in the riding of North Cape Breton and Victoria, and of the evidence taken and report of investigation held by H. P. Duchemin, in regard to same, and a detailed statement of the expenses of such investigation. Presented 17th January, 1913.—*Mr. McKenzie.*
Not printed.

61*eee*. Return to an Order of the House of the 9th December, 1912, for a return showing: 1. The names of all lightkeepers in the Province of Nova Scotia who were dismissed from office or employment since 10th October, 1911, together with the date of each dismissal. Presented 17th January, 1913.—*Mr. Maclean (Halifax)*.. .. ..*Not printed.*

61*fff*. Return to an Order of the House of the 4th December, 1912, for a return showing the detail and number of dismissals from public offices in the Department of Marine and Fisheries to this date in the County of Bonaventure, the names of the dismissed occupants, the reasons for their dismissal, the complaints against such officials and a copy of all correspondence with respect to the same, and of all reports of investigations where such were held; as well as a list of the new appointments made by the department, with names, residences, salaries and duties,and a copy of all recommendations of such appointments. Presented 17th January, 1913.—*Mr. Marcil (Bonaventure).*
Not printed.

61*ggg*. Return to an Order of the House of the 9th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of H. L. Tory, fishery officer at Guysborough, Guysborough County, N.S., and of all evidence taken, and report of investigation held by H. P. Duchemin, in regard to the same; also a detailed statement of the expenses of the investigation. Presented 17th January, 1913.—*Mr. Sinclair*.. .. ..*Not printed.*

61*hhh*. Return to an Order of the House of the 4th December, 1912, for a copy of all charges, correspondence, letters, telegrams, and other documents in the possession of the Department of Marine and Fisheries relating to the dismissal of John W. Davis, fishery officer, Guysborough, N.S. Presented 17th January, 1913.—*Mr. Sinclair.*
Not printed.

CONTENTS OF VOLUME 27—*Continued.*

61*jjj*. Return to an Order of the House of the 4th December, 1912, for a copy of all charges correspondence, letters, telegrams and other documents relating to the dismissal of Martin Bourque, lightkeeper at River Bourgeois, Richmond County, N.S., and of the evidence taken and of the report of the investigation held by H. P. Duchemin in regard to the same, and a detailed statement of the expenses of such investigation; and a copy of all papers relating to the appointment of his successor. Presented 17th January, 1913.—*Mr. Kyte.. .. ..Not printed.*

61*jjj*. Return to an Order of the House of the 4th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Frederick Poirier, buoy contractor, at Descouse, Richmond County, N.S. Presented 17th January, 1913.—*Mr. Kyte.. .. ..Not printed.*

61*kkk*. Return to an Order of the House of the 4th December, 1912, for a copy of all papers. letters, telegrams and petitions for and against the dismissal of Dr. George Pinault, as medical health officer of the Mic-Mac Indian reserve, at Ste. Anne de Restigouche. Bonaventure County, Quebec, and of all documents relating to the appointment of a successor, with the name, residence, salary and duties of the new appointee. Presented 20th January, 1913.—*Mr. Marcil.. .. ..Not printed.*

61*lll*. Return to an Order of the House of the 1st April, 1912, for a copy of all papers, letters, &c., concerning the dismissal of Frederick Veit, employed by the Department of Marine and Fisheries in the County of Gaspé. Presented 20th January, 1913.—*Mr. Lemieux.. .. ..Not printed.*

61*mmm*. Return to an Order of the House of the 1st April, 1912, for a copy of all letters. petitions, complaints, declarations and other documents in the possession of the Department of Marine and Fisheries, relating to the dismissal of Mr. Alfred Lalonde, employed in the warehouse of the Government yards at St. Joseph de Sorel and the appointment of his successor. Presented 20th January, 1913.—*Mr. Cardin..Not printed.*

61*nnn*. Return to an Order of the House of the 1st April, 1912, for a copy of all letters telegrams, complaints or other papers or documents in the possession of the Government or any department thereof, relating to the dismissal of James Webber, lightkeeper, Tor Bay Point, N.S. Presented 20th January, 1913.—*Mr. Sinclair.*
Not printed.

61*ooo*. Return to an Order of the House of the 1st April, 1912, for a copy of all documents letters, inquiries, reports, evidence, &c., relating to the dismissal or the resignation of Baptiste Desjardins as lighthouse keeper at Kamouraska. Presented 20th January, 1913.—*Mr. Lapointe (Kamouraska).. .. ..Not printed.*

61*ppp*. Return to an Order of the House of the 4th December, 1912, for a copy of all correspondence, letters, telegrams and other documents relating to the dismissal of Angus Smith, pilot on the steamer *Earl Grey*, and also of all the evidence taken at the latest investigation held in regard to the said complaints, and of the report of the investigation with regard to the same. Presented 20th January, 1913—*Mr. Macdonald.*
Not printed.

61*qqq*. Return to an Order of the House of the 9th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Michael J. Sampson, lightkeeper at Lower L'Ardoise, Richmond County, N.S. Presented 20th January, 1913.—*Mr. Kyte.. .. ..Not printed.*

61*rrr*. Return to an Order of the House of the 9th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relative to the dismissal of William Hackett, harbour commissioner at North Sydney, Nova Scotia, in the riding

CONTENTS OF VOLUME 27—*Continued.*

of North Cape Breton and Victoria, and of the evidence taken and report of investigation held by H. P. Duchemin in regard to same, and a detailed statement of the expenses of such investigation. Presented 20th January, 1913.—*Mr. McKenzie.* *Not printed.*

61*sss.* Return to an Order of the House of the 9th December, 1912, for a copy of all correspondence and other documents in the possession of the Department of Marine and Fisheries relating to the dismissal of Hormidas Lacasse, as wharfinger on the government wharf at Wendover, County of Prescott, Ontario, and the appointment of his successor. Presented 20th January, 1913.—*Mr. Proulx*.. .. ..*Not printed.*

61*ttt.* Return to an Order of the House of the 9th December, 1912, for a copy of all documents, papers, evidence and correspondence, relating to the dismissal of Geoffrey Gorman, coxswain of the lifeboat station at Herring Cove, Halifax County, N.S. Presented 20th January, 1913.—*Mr. Maclean (Halifax)*.. .. .. *Not printed.*

61*uuu.* Return to an Order of the House of the 10th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Captain George Wetmore, harbour master at Yarmouth, Yarmouth County, N.S., and the same information regarding the appointment of Captain Wetmore's successor, and of all evidence taken and report of investigation held by Charles Lane in regard to the same, also a detailed statement of expenses of such investigation. Presented 20th January, 1913.—*Mr. Law*.. .. ..*Not printed.*

61*vvv.* Return to an Order of the House of the 11th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Stanley Henlow, lightkeeper at Liscomb, Guysborough County, N.S., and of evidence taken and report of investigation held by H. P. Duchemin in regard to the same; also a detailed statement of the expenses of such investigation. Presented 20th January, 1913.—*Mr. Sinclair*.. .. ..*Not printed.*

61*www.* Return to an Order of the House of the 11th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of H. C. V. LeVatte, fishery officer at Louisburg, Cape Breton South, N.S., and of the evidence taken and reports of investigations held by H. P. Duchemin, in regard to the same. Presented 20th January, 1913.—*Mr. Carroll*.. .. ..*Not printed.*

61*xxx.* Return to an Order of the House of the 11th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Elias M. Boudrot, keeper of storm signal at Petit de Grat, Richmond County, N.S., and of the evidence taken and report of investigation held by H. P. Duchemin in regard to the same and a detailed statement of the expenses of such investigation; and a copy of all papers relating to the appointment of his successor. Presented 20th January, 1913.—*Mr Kyte*.. .. ..*Not printed.*

61*yyy.* Return to an Order of the House of the 10th December, 1912, for a return of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of A. B. Cox, Superintendent of Reduction Works at Canso, Guysborough County, N.S., and of all evidence taken and report of investigation held by H. P Duchemin in regard to the same; also a detailed statement of the expenses of such investigation. Presented 20th January, 1913.—*Mr. Kyte*.. .. ..*Not printed.*

61*zzz.* Return to an Order of the House of the 9th December, 1912, for a copy of all complaints and charges made against Jeffrey Crespo, sub-collector of Customs at Harbour au Bouche, Antigonish County, Nova Scotia, and of all letters, telegrams, correspondence and reports relating in any way to his dismissal and the appointment of a successor. Presented 20th January, 1913.—*Mr. Chisholm (Antigonish).* *Not printed.*

CONTENTS OF VOLUME 27—*Continued.*

61*aaaa*. Return to an Order of the House of the 9th December, 1912, for a copy of all letters, papers, charges and correspondence between the Department of Customs and all other persons regarding the dismissal from office of Thomas Cameron, preventive officer at Andover, N.B., and also of all evidence and reports thereon with reference to the dismissal of the said officer. Presented 20th January, 1913.—*Mr. Michaud.* *Not printed.*

61*bbbb*. Return to an Order of the House of the 11th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of L. W. Pye, customs officer at Liscomb, Guysborough County, N.S., and of all evidence taken and reports of investigation held by H. P. Duchemin in regard to the same; also a detailed statement of the expenses of such investigation. Presented 20th January, 1913.—*Mr. Sinclair*.. .. ..*Not printed.*

61*cccc*. Return to an Order of the House of the 9th December, 1912, for a copy of all complaints, accusations, inquiries, reports, correspondence, and of all documents relating to the dismissal of Lucien O. Thisdale, a customs employee at Valleyfield, Quebec, and the appointment of his successor. Presented 20th January, 1913.—*Mr. Papineau.* *Not printed.*

61*dddd*. Return to an Order of the House of the 11th December, 1912, for a copy of all letters, telegrams, correspondence, reports, and other documents relating to the dismissal of Alexander Macdonald of Doctor's Brook, Antigonish County, as sub-collector of customs. Presented 20th January, 1913.—*Mr. Chisholm (Antigonish).* *Not printed.*

61*eeee*. Return to an Order of the House of the 9th December, 1912, for a copy of all charges, correspondence, letters, telegrams, and other documents relative to the dismissal of Henry Cann, customs official and preventive officer at North Sydney, Nova Scotia, in the riding of North Cape Breton and Victoria. Presented 20th January, 1913.—*Mr. McKenzie*.. .. ..*Not printed*

61*ffff*. Return to an Order of the House of the 10th December, 1912, for a copy of all documents concerning the dismissal of Charles Mennier, customs preventive officer at Marieville, Quebec. Presented 20th January, 1913.—*Mr. Lemieux*.. .. ..*Not printed.*

61*gggg*. Return to an Order of the House of the 5th December, 1912, for a copy of all charges, correspondence, letters, telegrams, instructions, minutes of evidence taken and had on any inquiry investigation had, held or taken, and of all other papers and documents relating to the dismissal of George H. Cochrane, Collector of Customs at the Port of Moncton, New Brunswick; together with a copy of all letters and other correspondence between the Honourable Minister of Customs, and the member representing the County of Westmorland, New Brunswick, in this House, and of all letters, papers, telegrams, recommendations, appointments, or other papers and documents relating to the appointment of a collector of customs to succeed the said George H. Cochrane. Presented 20th January, 1913.—*Mr Emmerson*.. .. ..*Not printed.*

61*hhhh*. Return to an Order of the House of the 22nd January, 1912, for a copy of all correspondence, documents, recommendations and reports respecting the dismissal of C Michaud, postmaster at St. Germain, Kamouraska, and the appointment of his successor. Presented 20th January, 1913.—*Mr. Lapointe (Kamouraska)*.. ..*Not printed.*

61*iiii*. Return to an Order of the House of the 25th March, 1912, for a copy of all letters, telegrams and other documents, and of all complaints or accusations relating in any manner to the dismissal of Mr. Emile Archambault, letter carrier of Montreal, and a copy of the inquiry, and of the report of the inquiry held. Presented 20th January, 1913.—*Mr. Seguin*.. .. ..*Not printed.*

CONTENTS OF VOLUME 27—*Continued.*

61*jjjj*. Return to an Order of the House of the 9th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Norman Morrison, postmaster at Ferguson's Lake, Richmond County, N.S. Presented 21st January, 1913.—*Mr. Kyte*.. .. .., ...*Not printed.*

61*kkkk*. Return to an Order of the House of the 9th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of D. J. McKillop, postmaster at McKillop, Richmond County, N.S. Presented 21st January, 1913.—*Mr. Kyte*.. .. ..*Not printed.*

61*llll*. Return to an Order of the House of the 22nd January, 1912, for a copy of all correspondence, papers and reports in connection with the investigation recently held at the Ste. Agathe post office, County of Terrebonne. Presented 21st January, 1913.—*Mr. Lemieux*.. .. ..*Not printed.*

61*mmmm*. Return to an Order of the House of the 11th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Bertie Boudrot, lightkeeper at Poulamon, Richmond County, N.S., and of the evidence taken and reports of investigation held by H. P. Duchemin in regard to the same, and a detailed statement of the expenses of such investigation, and a copy of all papers relating to the appointment of his successor. Presented 22nd January, 1913.—*Mr. Kyte*.. .. ..*Not printed.*

61*nnnn*. Return to an Order of the House of the 1st April, 1912, for a copy of all letters, telegrams and other documents and of all complaints, accusations and requests for inquiry, relating in any manner to the lighthouse keepers of Repentigny, P.Q., Messrs. Leon Rivest, J. B. Lachapelle and Louis Dubois, since 21st September last; also a copy of the inquiry and the report of the inquiry held in the matter. Presented 22nd January, 1913.—*Mr. Seguin*.. .. ..*Not printed.*

61*oooo*. Return to an Order of the House of the 9th December, 1912, for a copy of all papers, documents, telegrams, letters, &c., relating to the dismissal of L. P. Carignan, forest ranger in the constituency of Champlain, Quebec. Presented 24th January, 1913.—*Mr. Maclean (Halifax)*.. .. ..*Not printed.*

61*pppp*. Return to an Order of the House of the 5th December, 1912, for a copy of all correspondence, complaints, petitions, memoranda, notes of evidence, letters, reports of investigations and other documents in the possession of the Department of Customs, relating to the dismissal of James S. Harvey, preventive officer, New Richmond, Quebec; W. L. Kempffer, preventive officer at Paspebiac, Quebec; J. Herbert Sweetman, preventive officer at Port Daniel, Quebec; J. B. Le Blanc, preventive officer, at Carleton, Quebec; J. Nadeau, preventive officer, Nouvelle, Quebec, as well as a copy of all recommendations made regarding the appointment of their various successors and the names, salaries, duties and residences, with a copy of their instructions. Presented 24th January, 1913.—*Mr. Marcil*.. .. ..*Not printed.*

61*qqqq*. Return to an Order of the House of the 9th December, 1912, for a copy of all charges, correspondence, letters, telegrams, and other documents relative to the dismissal of William Marsh, preventive officer at Little Pond, Sydney Mines, in the riding of North Cape Breton and Victoria. Presented 24th January, 1913.—*Mr. McKenzie. Not printed.*

61*rrrr*. Return to an Order of the House of the 9th December, 1912, for a copy of all papers, letters, telegrams, and petitions, for and against the dismissal of Duncan McDonald, preventive officer of customs at Athelstan, County of Huntingdon; also a copy of the report of investigation and evidence submitted to investigating commissioner. Presented 24th January, 1913.—*Mr. Robb*.. .. ..*Not printed.*

CONTENTS OF VOLUME 27—*Continued.*

61*ssss*. Return to an Address to His Royal Highness the Governor General of the 11th December, 1912, for a copy of all papers, documents, orders in council, telegrams, letters, &c., relating to the dismissal from office of Lemuel Bent, late Collector of Customs at Oxford, N.S. Presented 24th January 1913.—*Mr. Maclean (Halifax). Not printed.*

61*tttt*. Return to an Order of the House of the 11th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Pascal Poirier, Collector of Customs at Descouse, Richmond County, N.S., and of the evidence taken and reports of investigation held by H. P. Duchemin in regard to the same and a detailed statement of the expenses of such investigation; and a copy of all papers relating to the appointment of his successor. Presented 24th January, 1913.—*Mr. Kyte.. .. ..Not printed.*

61*uuuu*. Return to an Order of the House of the 4th December, 1912, for a copy of all correspondence, letters, telegrams, reports and other documents concerning the dismissal of Donald J. Hachey, Collector of Customs at Bathurst, County of Gloucester, and the appointment of his successor. Presented 24th January, 1913.—*Mr. Turgeon. Not printed.*

61*vvvv*. Return to an Address to His Royal Highness the Governor General of the 4th December, 1912, for a copy of all correspondence, orders in council, and all other papers or documents in any way relating to the dismissal of John Maher, from the service of the Customs Department at Montreal. Presented 24th January, 1913.—*Mr. Murphy.. .. ..Not printed.*

61*wwww*. Return to an Order of the House of the 11th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Peter Fougère, preventive and customs officer at Petit de Grat, Richmond county, N.S., and of the evidence taken and report of investigation held by H. P. Duchemin, in regard to the same, and a detailed statement of the expenses of such investigation; and a copy of all papers relating to the appointment of his successor. Presented 24th January, 1913.—*Mr. Kyte.. .. ..Not printed.*

61*xxxx*. Return to an Order of the House of the 9th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of James Grantmyre, preventive officer at Little Bras D'or, N.S., in the riding of North Cape Breton and Victoria. Presented 24th January, 1913.—*Mr. McKenzie. Not printed.*

61*yyyy*. Return to an Order of the House of the 15th January, 1913, for a return showing all the employees on the Soulanges Canal who have been dismissed from their duties since the 21st September, 1911, by whom each of these employees has been replaced, and for what causes were they dismissed. Presented 27th January, 1913.—*Mr. Boyer.. .. ..Not printed.*

61*zzzz*. Return to an Order of the House of the 15th January, 1913, for a copy of all letters, documents, telegrams, reports, correspondence and recommendations in any way relating to the dismissal of Andrew Melville, locktender at Cardinal, Ontario. Presented 27th January, 1913.—*Mr. Proulx.. .. ..Not printed.*

61*aaaaa*. Return to an Order of the House of 15th January, 1913, for a copy of all letters, documents, telegrams, reports, correspondence and recommendations in any way relating to the dismissal of George Short, canal bridgetender at Cardinal, Ontario. Presented 27th January, 1913.—*Mr. Guthrie.. .. ..Not printed.*

CONTENTS OF VOLUME 27—*Continued.*

61*bbbbb*. Return to an Order of the House of the 15th January, 1913, for a copy of all letters, documents, telegrams, reports, correspondence and recommendations in any way relating to the dismissal of N. Broderick, locktender at Cardinal, Ontario. Presented 27th January, 1913.—*Mr. McMillan*.. .. ..*Not printed.*

61*ccccc*. Return to an Order of the House of the 15th January, 1913, for a copy of all letters, documents, telegrams, reports, correspondence and recommendations in any way relating to the dismissal of Thomas McLatchie, locktender at Cardinal, Ontario. Presented 27th January, 1913.—*Mr. Graham*.. .. ..*Not printed.*

61*ddddd*. Return to an Order of the House of the 15th January, 1913, for a copy of all letters, documents, telegrams, reports, correspondence and recommendations in any way relating to the dismissal of Elgin McLaughlin, locktender at Cardinal, Ontario. Presented 27th January, 1913.—*Mr. Emmerson*.. .. ..*Not printed.*

61*eeeee*. Return to an Order of the House of the 15th January, 1913, for a copy of all letters, documents, telegrams, reports, correspondence and recommendations in any way relating to the dismissal of Robert Robertson, locktender at Cardinal, Ontario. Presented 27th January, 1913.—*Mr. Lemieux*.. .. ..*Not printed.*

61*fffff*. Return to an Order of the House of the 15th January, 1913, for a copy of all letters, documents, telegrams, reports, correspondence and recommendations in any way relating to the dismissal of William L. Gladstone, locktender at Cardinal, Ontario. Presented 27th January, 1913.—*Mr. Pugsley*.. .. ..*Not printed.*

61*ggggg*. Return to an Order of the House of the 15th January, 1913, for a copy of all letters, documents, telegrams, reports, correspondence and recommendations in any way relating to the dismissal of Byron VanCamp, locktender at Cardinal, Ontario. Presented 7th January, 1913.—*Mr. Murphy*.. .. ..*Not printed.*

61*hhhhh*. Return to an Order of the House of the 15th January, 1913, for a copy of all letters, documents, telegrams, reports, correspondence and recommendations in any way relating to the dismissal of Samuel English, canal bridge tender at Cardinal, Ontario. Presented 27th January, 1913.—*Mr. Carvell*.. .. ..*Not printed.*

61*iiiii*. Return to an Order of the House of the 15th January, 1913, for a copy of all letters, documents, telegrams, reports, correspondence and recommendations in any way relating to the dismissal of Edward F. Moran, locktender at Cardinal, Ontario. Presented 27th January, 1913.—*Mr. Oliver*.. .. ..*Not printed.*

67*jjjjj*. Return to an Order of the House of the 9th December, 1912, for a copy of all letters correspondence, documents and reports relating to the dismissal of William R. Fougere, of Frankville, Antigonish County, N.S., a sectionman on the Intercolonial railway, and for a statement in detail of the expenses connected with the investigations of the charges against him. Presented 27th January, 1913.—*Mr. Chisholm (Antigonish).* *Not printed.*

61*kkkkk*. Return to an Order of the House of the 9th December, 1912, for a copy of all letters, correspondence, documents and reports relating to the dismissal of John Melanson, of Afton, Antigonish County, N.S., a sectionman on the Intercolonial railway, and for a statement in detail of the expenses connected with the investigation of the charges against him. Presented 27th January, 1913.—*Mr. Chisholm (Antigonish).* *Not printed.*

61*lllll*. Return to an Order of the House of the 11th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Ronald D. McDonald, fishery overseer, at Broad Cove, Inverness County, Nova Scotia, and of the evidence taken and report of investigation held by H. P. Duchemin in regard to the same; also a detailed statement of the expenses of such investigation. Presented 27th January, 1913.—*Mr. Chisholm (Inverness).* *Not printed.*

CONTENTS OF VOLUME 27—*Continued.*

61*mmmmm*. Return to an Order of the House of the 11th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of John McLean, fishery officer at Gabarouse, Cape Breton South, N.S., and of evidence taken and reports of investigations held by H. P. Duchemin, in regard to the same. Presented 27th January, 1913.—*Mr. Carroll*.. .. ..*Not printed.*

61*nnnnn*. Return to an Order of the House of the 9th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relative to the dismissal of A. R. Forbes, fishery overseer at North Sydney, Nova Scotia in the riding of North Cape Breton and Victoria, and of the evidence taken and report of investigation held by H. P. Duchemin, in regard to same, and a detailed statement of the expenses of such investigation. Presented 27th January, 1913.—*Mr. McKenzie.* *Not printed.*

61*ooooo*. Return to an Order of the House of the 15th January, 1913, for a copy of all correspondence, letters, telegrams, complaints, petitions, and other documents concerning the dismissal of Sebastien Savoie, superintendent of the lobster hatchery at Shippigan, Gloucester County, N.B., and the appointment of his successor. Presented 27th January, 1913.—*Mr. Turgeon*.. .. ..*Not printed.*

61*ppppp*. Return to an Order of the House of the 9th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of D. S. Hendsbee, weigher, reduction works, Canso, Guysborough County, N.S., and of all evidence taken and report of investigation held by H. P. Duchemin in regard to the same; also a detailed statement of the expenses of such investigation. Presented 27th January, 1913.—*Mr. Sinclair*.. .. ..*Not printed.*

61*qqqqq*. Return to an Order of the House of the 11th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relative to the dismissal of M. Muce, lightkeeper at Cheticamp Island, Inverness County, Nova Scotia, and of the evidence taken and report of investigation held by H. P. Duchemin in regard to the same; also a detailed statement of the expenses of such investigation. Presented 29th January, 1913.—*Mr. Chisholm (Inverness)*.. .. .. ..*Not printed.*

61*rrrrr*. Return to an Order of the House of the 15th January, 1913, for a copy of all papers, documents, telegrams, reports, correspondence and recommendations in any way relating to the dismissal of Dr. J. D. R. Williams, collector of canal tolls at Cardinal, Ontario, and of the appointment of his successor. Presented 30th January, 1913.—*Mr. McMillan*.. .. ..*Not printed.*

61*sssss*. Return to an Order of the House of the 15th January, 1913, for a copy of all papers, letters, telegrams, evidence and other documents regarding the dismissal of John W. Bohan, preventive officer at Bath, Carleton County, N.B. Presented 3rd February, 1913.—*Mr. Carvell*.. .. ..*Not printed.*

61*ttttt*. Return to an Order of the House of the 15th January, 1913, for a copy of all papers, documents, correspondence, &c., relating to the dismissal of J. V. Smith, sub-collector of customs at Wood's Harbour, Shelburne County, N.S. Presented 3rd February, 1913. —*Mr. Law*.. .. ..*Not printed.*

61*uuuuu*. Return to an Order of the House of the 15th January, 1913, for a copy of all papers, letters, telegrams, evidence and other documents regarding the dismissal of John Y. Fleming, customs officer at Debec, Carleton County, N.B. Presented 3rd February, 1913.—*Mr. Carvell*.. .. ..*Not printed.*

61*vvvvv*. Return to an Order of the House of the 15th January, 1913, for a copy of all papers, letters, telegrams, evidence and other documents regarding the dismissal of Matthias Meagher, preventive officer at Debec, Carleton County, N.B. Presented 3rd February, 1913.—*Mr. Carvell*.. .. ..*Not printed.*

CONTENTS OF VOLUME 27—*Continued.*

61*wwwww*. Return to an Order of the House of the 9th December, 1912, for a copy of all correspondence, letters, telegrams, complaints, and of the evidence given at investigation, if one was held, relating to the dismissal of Mr. A. J. Gosselin, acting preventive officer of customs at St. Albans, Vermont, through the port of St. Armand, County of Missisquoi. Presented 4th February, 1913.—*Mr. Kay*.. .. ..*Not printed.*

61*xxxxx*. Return to an Order of the House of the 4th December, 1912, for a copy of all papers, letters, telegrams, and petitions for and against the dismissal of James W. Bannon, preventive officer of customs at St. Agnes de Dundee, County of Huntingdon also a copy of the report of investigation and evidence, if any, submitted to investigating commissioner. Presented 4th February, 1913.—*Mr. Robb*.. .. ..*Not printed.*

61*yyyyy*. Return to an Order of the House of the 4th December, 1912, for a return showing the number of postmasters that have been dismissed in the County of Pictou since 1st October, 1911; the names of the postmasters who have been appointed to succeed them; the causes of the dismissals and all complaints and correspondence with respect to same, and of all reports of investigation where investigations have been held. Presented 4th February, 1913.—*Mr. Macdonald*.. .. ..*Not printed.*

61*zzzzz*. Return to an Address to His Royal Highness the Governor General of the 4th December, 1912, for a copy of all correspondence, orders in council, and all other papers or documents in any way relating to the dismissal of James Murphy from the position of postmaster at Tweed, Ontario. Presented 4th February, 1913.—*Mr. Murphy*.. .. ..*Not printed.*

61 (6*a*). Return to an Order of the House of the 15th January, 1913, for a copy of all letters, documents, telegrams, reports, correspondence and recommendations in any way relating to the dismissal of H. B. Easton, immigration agent at Prescott, Ontario. Presented 4th February, 1913.—*Mr. Murphy*.. .. ..*Not printed.*

61 (6*b*). Return to an Order of the House of the 15th January, 1913, for a copy of all letters, documents, telegrams, reports, correspondence and recommendations in any way relating to the dismissal of B. Hughes, immigration agent at Prescott, Ontario. Presented 4th February, 1913.—*Mr. Oliver*.. .. ..*Not printed.*

61 (6*c*). Return to an Order of the House of the 15th January, 1913, for a copy of all letters, documents, telegrams, reports, correspondence and recommendations in any way relating to the dismissal of George Walsh, immigration agent at Prescott, Ontario. Presented 4th February, 1913.—*Mr. Oliver*.. .. ..*Not printed.*

61 (6*d*). Return to an Order of the House of the 15th January, 1913, for a copy of all papers, letters, telegrams, evidence and other documents regarding the dismissal of Newton S. Dow, immigration agent at McAdam Junction, York County, N.B. Presented 4th February, 1913.—*Mr. Carvell*.. .. ..*Not printed.*

61 (6*e*). Return to an Order of the House of the 15th January, 1913, for a copy of all papers, letters, telegrams, evidence and other documents regarding the dismissal of Oliver Hemphill, immigration agent at Debec, Carleton County, N.B. Presented 4th February, 1913.—*Mr. Carvell*.. .. ..*Not printed.*

61 (6*f*). Return to an Order of the House of the 9th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Martin Johnston, preventive officer at Rea Islands, Richmond County, N.S Presented 6th February, 1913.—*Mr. Kyte*.. .. ..*Not printed.*

CONTENTS OF VOLUME 27—*Continued.*

61 (6*g*). Return to an Order of the House of the 10th December, 1912, for a copy of all correspondence, letters, telegrams and other documents respecting the dismissal of J. E. Phaneuf, postmaster of St. Hugues, County of Bagot. Presented 6th February, 1913.—*Mr. Marcile*.. .. ..*Not printed*

61 (6*h*). Return to an Order of the House of the 9th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Murdock McCutcheon, postmaster at Sonora, Guysborough County, N.S., and of all evidence taken and report of investigation held by Mr. H. P. Duchemin, in regard to the same; also a detailed statement of the expenses of such investigation. Presented 6th February, 1913.—*Mr. Sinclair*.. .. ..*Not printed*

61 (6*i*). Return to an Order of the House of the 15th January, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relative to the dismissal of Duncan Gillies, fishery overseer at Baddeck, C.B., in the riding of North Cape Breton and Victoria, and of the evidence taken and report of investigation held by H. P. Duchemin, in regard to same, and a detailed statement of the expenses of such investigation. Presented 7th February, 1913.—*Mr. McKenzie*.. .. ..*Not printed.*

61 (6*j*). Return to an Order of the House of the 9th December, 1912, for a copy of all complaints, accusations, correspondence, petitions and of all documents and reports respecting the dismissal of Antonio Leduc, postmaster of St. Timothée, in the County of Beauharnois and the appointment of his successor. Presented 7th February, 1913.—*Mr. Papineau*.. .. ..*Not printed.*

61 (6*k*). Return to an Address to His Royal Highness the Governor General of the 4th December, 1912, for a copy of the recommendation to council, the order in council, all correspondence with the government or any member thereof, and of all letters, documents and papers in any way connected with the dismissal of Charles Arthur Bowman from the engineering branch of the Department of Railways and Canals.—*Mr. Clark (Red Deer)*.. .. ..*Not printed.*

61 (6*l*). Return to an Order of the House of the 29th January, 1913, for a copy of all papers, documents, evidence, reports, letters, correspondence, &c., relating to the dismissal of Elnathan D. Smith, fishery overseer, Shag Harbour, Shelburne County, N.S. Presented 11th February, 1913.—*Mr. Law*.. .. ..*Not printed.*

61 (6*m*). Return to an Order of the House of the 15th January, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relative to the dismissal of Donald McAulay, lightkeeper, Plaister, Baddeck Bay, C.B., riding of North Cape Breton and Victoria, and of the evidence taken and reports of investigation held by H. P. Duchemin in regard to the same, and a detailed statement of the expenses of such investigation. Presented 11th February, 1913.—*Mr. McKenzie.* *Not printed.*

61 (6*n*). Return to an Order of the House of the 29th January, 1913, for a copy of all papers, documents, letters, correspondence, &c., relating to the dismissal of John Fredericks, lightkeeper at East Jordan, Shelburne County, N.S. Presented 11th February, 1913.—*Mr. Law*.. .. ..*Not printed.*

61 (6*o*). Return to an Order of the House of the 29th January, 1913, for a copy of all papers, documents, letters, correspondence, &c., relating to the dismissal of John Fredericks, wharfinger at East Jordan, Shelburne County, N.S. Presented 11th February, 1913.—*Mr. Law*.. .. ..*Not printed.*

CONTENTS OF VOLUME 27—*Continued.*

61 (6*p*). Return to an Order of the House of the 29th January, 1913, for a copy of all papers, documents, letters, correspondence, &c., relating to the dismissal of John C Morrison, harbour master at Shelburne, N.S. Presented 11th February, 1913.—*Mr. Maclean (Halifax)*.. .. ..*Not printed.*

61 (6*q*). Return to an Order of the House of the 15th January, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relative to the dismissal of Captain Roderick McDonald, tide waiter, at Big Bras D'Or, riding of North Cape Breton and Victoria, N.S., and of the evidence taken and reports of investigation held by H. P. Duchemin in regard to the same, and a detailed statement of the expenses of such investigation. Presented 11th February, 1913.—*Mr. McKenzie.* *Not printed.*

61 (6*r*). Return to an Order of the House of the 15th January, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relative to the dismissal of James Maloney, customs officer at Dingwall, riding of North Cape Breton and Victoria, N.S., and of the evidence taken and reports of investigation held by H. P. Duchemin in regard to the same, and a detailed statement of the expenses of such investigation. Presented 11th February, 1913.—*Mr. McKenzie*.. .. ..*Not printed.*

61 (6*s*). Return to an Order of the House of the 9th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relative to the dismissal of Hugh D. McEachern, customs officer at north side East Bay, Cape Breton, in the riding of North Cape Breton and Victoria, and of the evidence taken and report of investigation held by H. P. Duchemin, in regard to same, and a detailed statement of the expenses of such investigation. Presented 11th February, 1913.—*Mr. McKenzie*.. .. ..*Not printed.*

61 (6*t*). Return to an Order of the House of the 29th January, 1913, for a copy of all papers, documents, evidence, reports and correspondence relating to the dismissal of Thos. H. Hall, sub-collector of customs at Sheet Harbour, N.S. Presented 11th February, 1913.—*Mr. Maclean (Halifax)*.. .. ..*Not printed.*

61(6*u*). Return to an Order of the House of the 9th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relative to the dismissal of J. A. McNeil, customs officer at Grand Narrows, Nova Scotia, in the riding of North Cape Breton and Victoria, and of the evidence taken and report of investigation held by H. P. Duchemin, in regard to same, and a detailed statement of the expenses of such investigation. Presented 11th February, 1913.—*Mr. McKenzie.* *Not printed.*

61 (6*v*). Return to an Order of the House of the 9th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relative to the dismissal of George Burchell, custom house officer at Sydney Mines, Nova Scotia, in the riding of North Cape Breton and Victoria, and of the evidence taken and report of investigation held by H. P. Duchemin, in regard to same, and a detailed statement of the expenses of such investigation. Presented 11th February, 1913.—*Mr. McKenzie.* *Not printed.*

61 (6*w*). Return to an Order of the House of the 15th January, 1913, for a copy of all papers, documents, telegrams, reports, correspondence and recommendations in any way relating to the dismissal of W. H. Saver, collector of customs at Cardinal, Ont., and the appointment of his successor. Presented 11th February, 1913.—*Mr. McMillan.* *Not printed.*

CONTENTS OF VOLUME 27—*Continued.*

61 (6*x*). Return to an Order of the House of the 9th December, 1912, for a copy of all charges, correspondence, telegrams and other documents relative to the dismissal of Captain George Livingstone, custom officer at Big Bras D'Or, Cape Breton, in the riding of North Cape Breton and Victoria, and of the evidence taken and report of investigation held by H. P. Duchemin, in regard to same and a detailed statement of the expenses of such investigation. Presented 11th February, 1913.—*Mr. McKenzie.* *Not printed.*

61 (*y*). Return to an Order of the House of the 10th December, 1912, for a copy of all correspondence, reports and other documents and papers relating to the dismissal of H. Lacasse, as postmaster at Wendover, County of Prescott, Ontario, and the appointment of his successor. Presented 13th February, 1913.—*Mr. Proulx.. ..Not printed*

61 (6*z*). Return to an Order of the House of the 9th December, 1912, for a copy of all correspondence and other papers connected with the removal of Harry A. Drigg, from the position of postmaster at Grassey Lake, Alberta. Presented 13th February, 1913.—*Mr. Buchanan.. .. ..Not printed*

61 (7*a*). Return to an Address to His Royal Highness the Governor General of the 9th December, 1912, for a copy of all papers, memoranda, orders in council, and correspondence relating to the dismissal of A. H. Stratton, late postmaster at Peterborough, Ont. Presented 17th February, 1913.—*Mr. Maclean (Halifax).* *Not printed*

61 (7*b*). Return to an Order of the House of the 10th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Henry Burrell, postmaster, Yarmouth North, Yarmouth County, N.S., and the same information regarding the appointment of Henry Burrell's successor, and of the evidence taken and report of investigation held by Charles Lane in regard to the same, also a detailed statement of expenses of such investigation. Presented 18th February, 1913.—*Mr. Law.. .. ..Not printed.*

61 (7*c*). Return to an Order of the House of the 4th December, 1912, for a return showing all the postmasters dismissed by the present government in the County of Gloucester. the names of such persons, the reasons for their dismissal, nature of the charges made against them; also a copy of all correspondence connected with it, and reports of investigations in cases where such investigations were instituted. Presented 18th February, 1913.—*Mr. Turgeon.. .. ..Not printed.*

61 (7*d*). Return to an Order of the House of the 10th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Dr. Charles A. Webster, port physician at Yarmouth, County of Yarmouth, N.S., and the same information regarding the appointment of Dr. Webster's successor. Presented 18th February, 1913.—*Mr. Law.. .. ..Not printed*

61 (7*e*). Return to an Order of the House of the 29th January, 1913, for a copy of all letters, papers, charges and correspondence between the Department of Marine and Fisheries and all other persons, regarding the dismissal of Jos. Lord, keeper of lighthouses at Pointe à la Mule on the River Richelieu, Parish of St. Blaise, County of Saint Jean and Iberville and of all reports thereon with reference to the dismissal of the said Mr. Lord. Presented 19th February, 1913.—*Mr. Demers.. .. .. ..Not printed.*

61 (7*f*). Return to an Order of the House of the 15th January, 1913, for a copy of all correspondence, letters, telegrams and petitions concerning the dismissal of Henri Friolet, wharfinger at Caraquet, and Richard Southwood, wharfinger and agent of the Storm Signal Service at Bathurst, Gloucester County, N.B., and the appointment of their successors. Presented 19th February, 1913.—*Mr. Turgeon.. .. .. ..Not printed.*

CONTENTS OF VOLUME 27—*Continued.*

61 (*7g*). Return to an Order of the House of the 4th December, 1912, for a copy of all correspondence, letters, telegrams, reports and other documents, respecting the removal of Joseph L. Robichaud, lighthouse keeper at Miscou, County of Gloucester and the appointment of his successor; also of all correspondence respecting the engagement of the engineer of fog alarm system attached to that station, and the certificates required by the Minister of Marine, showing the competence of that engineer; with the names of the new keeper and of the said engineer and their ages. Presented 19th February, 1913.—*Mr. Turgeon*.. .. ..*Not printed.*

61 (*7h*). Return to an Order of the House of the 29th January, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Captain Pope as lighthouse keeper at Scatarie, Cape Breton South, N.S., and of the evidence taken and reports of investigation held by H. P. Duchemin, in regard to the same. Presented 19th February, 1913.—*Mr. Carroll*.. .. ..*Not printed*

61 (*7i*). Return to an Order of the House of the 29th January, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Captain W. W. Lewis, as shipping master at Louisburg, Cape Breton South, Nova Scotia, and of evidence taken and reports of investigation held by H. P. Duchemin, in regard to the same. Presented 19th February, 1913.—*Mr. Carroll.*
Not printed.

61 (*7j*). Return to an Order of the House of the 4th December, 1912, for a return showing the names of postmasters that have been dismissed in the County of Bonaventure since 1st October, 1911; the names of the postmasters who have been appointed to succeed them; the causes of the dismissals and a copy of all complaints and correspondence with respect to same, and of all reports of investigations where such have been held, with the reasons given for not holding any such investigation, when not held. Presented 19th February, 1913.—*Mr. Marcil*.. .. ..*Not printed*

61 (*7k*). Return to an Order of the House of the 15th January, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relative to the dismissal of George Hines, lighthouse keeper at South Ingonish, riding of North Cape Breton and Victoria, N.S., and of the evidence taken and reports of investigation held by H. P. Duchemin, in regard to the same, and a detailed statement of the expenses of such investigation. Presented 20th February, 1913.—*Mr. McKenzie*..*Not printed.*

61 (*7l*). Return to an Order of the House of the 15th January, 1913, for a return showing a list of the lighthouse keepers removed by the present government in the County of Two Mountains, the names of such persons, the reasons for their dismissal, the nature of the complaints made against them; also a copy of all correspondence and petitions relating thereto, and reports of inquiries in the cases, where such have been held; and also the names of their successors. Presented 20th February, 1913.—*Mr. Ethier*.. .. ..*Not printed.*

61 (*7m*). Return to an Order of the House of the 29th January, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relative to the dismissal of Archibald McDonald, preventive officer at Mull River, Inverness County, Nova Scotia. Presented 20th February, 1913. *Mr. Chisholm (Inverness)*..*Not printed.*

61 (*7n*). Return to an Order of the House of the 29th January, 1913, for a copy of all letters, correspondence on file referring to the dismissal of Donald Chisholm, of Tracadie, in the County of Antigonish, as preventive officer. Presented 20th February, 1913.—*Mr. Chisholm (Antigonish)*... .. ..*Not printed.*

CONTENTS OF VOLUME 27—*Continued.*

61 (7*o*). Return to an Order of the House of the 29th January, 1913, for a copy of all letters, telegrams, reports and other documents relative to the dismissal of Edward C. Humphreys, of Trenton, N.S., as an officer of the Inland Revenue Department and to the appointment of his successor. Presented 20th February, 1913.—*Mr. Macdonald.* *Not printed.*

61 (7*p*). Return to an Order of the House of the 9th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relative to the dismissal of H. J. Fixott, port physician at Arichat, Richmond County, N.S. Presented 21st February, 1913.—*Mr. Kyte*.. .. ..*Not printed.*

61 (7*q*). Return to an Order of the House of the 10th December, 1912, for a copy of all correspondence, letters, telegrams and other documents relating to the dismissal of D. Morin as postmaster of St. Pie de Bagot, County of Bagot. Presented 21st February, 1913.—*Mr. Marcil* (*Bagot*).. .. ..*Not printed.*

61 (7*r*). Return to an Order of the House of the 10th December, 1912, for a copy of all correspondence, investigations and papers generally concerning the dismissal of Ernest Paquin, postmaster of St. Cecile de Levrard, County of Nicolet. Presented 21st February, 1913.—*Mr. Lemieux*.. .. ..*Not printed.*

61 (7*s*). Return to an Address to His Royal Highness the Governor General of the 17th February, 1913, for a copy of all complaints and charges made against John R. McDonald, Indian agent at Heatherton, Antigonish County, of the recommendations t council and of the order in council made thereon, and of all letters, correspondence, and documents connected in any way with his dismissal. Presented 25th February, 1913.—*Mr. Chisholm* (*Antigonish*)... .. ..*Not printed.*

61 (7*t*). Return to an Order of the House of the 15th January, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relative to the dismissal of Joseph Day, customs officer at Little Bras D'Or, C.B., in the riding of North Cape Breton and Victoria, and of the evidence taken and report of investigation held by H. P. Duchemin, in regard to same, and a detailed statement of the expenses of such investigation. Presented 25th February, 1913.—*Mr. McKenzie*.. .. ..*Not printed.*

61 (7*u*). Return to an Address to His Royal Highness the Governor General of the 29th January, 1913, for a copy of all complaints against Duncan McLeod, appraiser of customs at Sherbrooke, Province of Quebec, of all information obtained as to his conduct through seizures of goods by special officers of customs and by investigation; of all reports of investigation; of the order in council dismissing said Duncan McLeod; and of all correspondence between him and the Department of Customs. Presented 25th February, 1913.—*Mr. McCrae*.. .. ..*Not printed.*

61 (7*v*). Return to an Order of the House of the 17th February, 1913, for a copy of all papers, letters, telegrams, evidence, &c., given at the investigation or investigations and of reports of such investigations, relating to the dismissal of Edouard D Chiasson, sub-collector of customs at Lamèque, Gloucester County, and the appointment of his successor. Presented 25th February, 1913.—*Mr. Turgeon*.. ..*Not printed.*

61 (7*w*). Return to an Order of the House of the 15th January, 1913, for a copy of all papers, letters, telegrams, evidence and other documents regarding the dismissal of George F. Briggs, customs officer at McAdam Junction, York County, N.B. Presented 25th February, 1913.—*Mr. Carvell*.. .. ..*Not printed.*

CONTENTS OF VOLUME 27—*Continued.*

61 (*7x*). Return to an Order of the House of the 29th January, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of William A. Duan, lightkeeper at Green Island, Richmond County, Nova Scotia, and of the evidence taken and report of investigation held by H. P. Duchemin, in regard to the same; also a detailed statement of the expenses of such investigation. Presented 25th February, 1913.—*Mr. Kyte*.. .. ..*Not printed.*

61 (*7y*). Return to an Order of the House of the 29th January, 1913, for a copy of all papers, charges, correspondence, letters, telegrams and other documents relating to the dismissal of Thomas Cameron, preventive officer at Andover, N.B., and of the evidence taken and reports of investigation held by Mr. E. T. C. Knowles, in connection with the same. Presented 26th February, 1913.—*Mr. Michaud*.. .. ..*Not printed.*

61 (*7z*). Return to an Order of the House of the 29th January, 1913, for a copy of all complaints and charges made against Joseph McDonald, late of the customs office at Sydney, Cape Breton, Nova Scotia, and of all letters, telegrams and correspondence relating in any way to his dismissal and the appointment of his successor. Presented 26th February, 1913.—*Mr. Carroll*.. .. ..*Not printed.*

61 (*8a*). Return to an Order of the House of the 29th January, 1913, for a copy of all complaints and charges made against Angus McGillivray, late of customs office at Glace Bay, Cape Breton South, Nova Scotia, and of all letters, telegrams and correspondence relating in any way to his dismissal and the appointment of his successor. Presented 26th February, 1913.—*Mr. Carroll*.. .. ..*Not printed.*

61 (*8b*). Return to an Order of the House of the 3rd February, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relative to the dismissal of Roderick Bain, boatman at New Campbellton, riding of North Cape Breton and Victoria, N.S., and of the evidence taken and reports of the investigation held by H. P. Duchemin, in regard to same, with a detailed statement of expenses of such investigation. Presented 26th February, 1913.—*Mr. McKenzie*.. .. ..*Not printed.*

61 (*8c*). Return to an Order of the House of the 15th January, 1913, for a copy of all papers, documents, telegrams, reports, correspondence and recommendations in any way relating to the dismissal of W. A. Scott, lockmaster at Cardinal, Ontario, and of the appointment of his successor. Presented 27th February, 1913.—*Mr. McMillan.* *Not printed.*

61 (*8d*). Return to an Order of the House of the 27th January, 1913, for a copy of all letters, documents, telegrams, reports, correspondence and recommendations in any way relating to the dismissal of Bert Johnson, lockman at Nicholson, Ontario. Presented 27th February, 1913.—*Mr. Turgeon*.. .. ..*Not printed.*

61 (*8e*). Return to an Order of the House of the 27th January, 1913, for a copy of all letters, documents, telegrams, reports, correspondence and recommendations in any way relating to the dismissal of John Merrifield, lockmaster at Burritts Rapids, Ont., and the appointment of his successor. Presented 27th February, 1913.—*Mr. Chisholm.* *Not printed.*

61 (*8f*). Return to an Order of the House of the 15th January, 1913, for a copy of all papers, documents, telegrams, reports, correspondence and recommendations in any way relating to the dismissal of Neil Cummings, lockmaster at Cardinal, Ontario, and of the appointment of his successor. Presented 27th February, 1913.—*Mr. McMillan*.. .. ..*Not printed.*

CONTENTS OF VOLUME 27—*Continued.*

61 (8*g*). Return to an Order of the House of the 29th January, 1913, for a copy of all letters, papers, charges and correspondence between the Department of Railways and Canals and all other persons, regarding the dismissal of Mr. François Chagnon, lockkeeper at Saint Jean, County of Saint Jean and Iberville, and of all reports thereon with reference to the dismissal of the said Mr. Chagnon. Presented 27th February, 1913.—*Mr. Demers*.. .. ..*Not printed.*

61 (8*h*). Return to an Order of the House of the 15th January, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relative to the dismissal of Neil McNeil, bridge tender, Intercolonial railway, at Grand Narrows in the riding of North Cape Breton and Victoria. Presented 27th February, 1913.—*Mr. McKenzie*.. .. ..*Not printed.*

61 (8*i*). Return to an Order of the House of the 15th January, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relative to the dismissal of Archibald McKenzie, sectionman, Intercolonial railway, at Grand Narrows, in the riding of North Cape Breton and Victoria. Presented 27th February, 1913.—*Mr. McKenzie*.. .. ..*Not printed.*

61 (8*j*). Return to an Order of the House of the 15th January, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relative to the dismissal of John Fraser, bridge tender, Intercolonial railway, at Grand Narrows, in the riding of North Cape Breton and Victoria. Presented 27th February, 1913.—*Mr. McKenzie*.. .. ..*Not printed.*

61 (8*k*). Return to an Order of the House of the 27th January, 1913, for a copy of all letters, documents, telegrams, reports, correspondence and recommendations in any way relating to the dismissal of Demetrius Crozier, lockman at Merrickville, Ontario. Presented 27th February, 1913.—*Mr. Proulx*.. .. ..*Not printed.*

61 (8*l*). Return to an Order of the House of the 27th January, 1913, for a copy of all letters, documents, telegrams, reports, correspondence and recommendations in any way relating to the dismissal of Patrick Cussuk, lockman at Merrickville, Ontario Presented 27th February, 1913.—*Mr. Michaud*.. .. ..*Not printed.*

61 (8*m*). Return to an Order of the House of the 27th January, 1913, for a copy of all letters, documents, telegrams, reports, correspondence and recommendations in any way relating to the dismissal of Joseph H. Webster, lockman at Nicholson, Ontario. Presented 27th February, 1913.—*Mr. Pacaud*.. .. ..*Not printed.*

61 (8*n*). Return to an Order of the House of the 27th January, 1913, for a copy of all letters, documents, telegrams, reports, correspondence and recommendations in any way relating to the dismissal of Cyrus O'Neil, lockman at Nicholson, Ontario. Presented 27th February, 1913.—*Mr. Kyte*... .. ..*Not printed.*

61 (8*o*). Return to an Order of the House of the 27th January, 1913, for a copy of all letters, documents, telegrams, reports, correspondence and recommendations in any way relating to the dismissal of Michael Laughtin, bridgeman at Burritts Rapids. Ontario. Presented 27th February, 1913.—*Mr. Papineau*.. .. ..*Not printed.*

61 (8*p*). Return to an Order of the House of the 27th January, 1913, for a copy of all letters, documents, telegrams, reports, correspondence and recommendations in any way relating to the dismissal of John McKay, bridgeman at Becketts, Ontario. Presented 27th February, 1913.—*Mr. Lanctot*.. .. ..*Not printed.*

CONTENTS OF VOLUME 27—*Continued.*

61 (8*q*). Return to an Order of the House of the 27th January, 1913, for a copy of all letters, documents, telegrams, reports, correspondence and recommendations in any way relating to the dismissal of Edward Proctor, lockman at Burritts Rapids, Ont. Presented 27th February, 1913.—*Mr. Neely*.. .. ..*Not printed.*

61 (8*r*). Return to an Order of the House of the 27th January, 1913, for a copy of all letters, documents, telegrams, reports, correspondence and recommendations in any way relating to the dismissal of William Morrison, lockman at Burritts Rapids, Ont. Presented 27th February, 1913.—*Mr. Cash*.. .. ..*Not printed.*

61 (8*s*). Return to an Order of the House of the 15th January, 1913, for a copy of all letters, documents, telegrams, reports, correspondence and recommendations in any way relating to the dismissal of Adam Henderson, bridgemaster at Cardinal, Ontario. and of the appointment of his successor. Presented 27th February, 1913.—*Mr. Murphy. Not printed.*

61 (8*t*). Return to an Order of the House of the 29th January, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of James Feehan, fishery guardian or warden at Tracadie Harbour and Savage Harbour, Prince Edward Island. Presented 27th February, 1913.—*Mr. Hughes* (*Kings, P.E.I.*).. .. ..*Not printed.*

61 (8*u*). Return to an Order of the House of the 29th January, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relative to the dismissal of John C. McNeil, lighthouse keeper at Grand Narrows, in the riding of North Cape Breton and Victoria. Presented 27th February, 1913.—*Mr. McKenzie. Not printed.*

61 (8*v*). Return to an Order of the House of the 29th January, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of A. A. Chisholm, fishery overseer at Margaree Forks, Inverness County, Nova Scotia. Presented 28th February, 1913.—*Mr. Chisholm* (*Inverness*).. ..*Not printed.*

61 (8*w*). Return to an Order of the House of the 29th January, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relative to the dismissal of Charles E. Aucoin, collector of customs at Cheticamp, Inverness County, Nova Scotia, and of the evidence taken and report of investigation held by Mr. H. P. Duchemin, in regard to the same; also a detailed statement of the expenses of such investigation. Presented 28th February, 1913.—*Mr. Chisholm* (*Antigonish*). *Not printed.*

61 (8*x*). Return to an Order of the House of the 17th February, 1913, for a copy of all complaints and charges made against Charles L. Gass, late postmaster at Bayfield. Antigonish County, of the evidence taken, if any, before Commissioner Duchemin, and of his report thereon and of all letters, telegrams and documents of every kind relating to his dismissal and the appointment of his successor. Presented 28th February, 1913.—*Mr. Chisholm* (*Antigonish*).. .. ..*Not printed.*

61 (8*y*). Return to an Order of the House of the 17th February, 1913, for a copy of all letters and correspondence exchanged in reference to the dismissal of Cyprien Martin. of St. Basile, County of Madawaska, N.B., between the Department of Customs and the said Mr. Martin as preventive officer. Presented 28th February, 1913.—*Mr. Michaud*.. .. ..*Not printed.*

CONTENTS OF VOLUME 27—*Continued.*

61 (8*z*). Return to an Order of the House of the 9th December, 1912, for a copy of all complaints and charges made against Angus A. Boyd, postmaster at Boyd's post office, Antigonish County, Nova Scotia, and of all letters, telegrams and correspondence relating in any way to his dismissal, and the appointment of a successor. Presented 28th February, 1913.—*Mr. Chisholm (Antigonish)*.. .. ..*Not printed.*

61 (9*a*). Return to an Order of the House of the 9th December, 1912, for a copy of all complaints and charges made against John B. Macdonald, postmaster at Glasburn, Antigonish County, Nova Scotia, and of all letters, telegrams and correspondence relating in any way to his dismissal, and the appointment of a successor. Presented 28th February, 1913.—*Mr. Chisholm (Antigonish)*.. .. ..*Not printed*

61 (9*b*). Return to an Order of the House of the 9th December, 1912, for a copy of all complaints and charges made against Alex. G. Chisholm, postmaster at Ohio, Antigonish County, Nova Scotia, and of all letters, telegrams and correspondence relating in any way to his dismissal, and the appointment of a successor. Presented 28th February, 1913.—*Mr. Chisholm (Inverness)*.. .. ..*Not printed*

61 (9*c*). Return to an Order of the House of the 9th December, 1912, for a copy of all complaints and charges made against John J. McLean, postmaster at Cross Roads, Ohio, Antigonish County, Nova Scotia, and of all letters, telegrams and correspondence relating in any way to his dismissal and the appointment of a successor. Presented 28th February, 1913.—*Mr. Chisholm (Inverness)*.. .. ..*Not printed*

61 (9*d*). Return to an Order of the House of the 9th December, 1912, for a copy of all complaints and charges made against Dougald McDonald, postmaster at Doctors Brook, Antigonish County, Nova Scotia, and of all letters, telegrams and correspondence relating in any way to his dismissal, and the appointment of his successor. Presented 28th February, 1913.—*Mr. Chisholm (Antigonish)*.. .. ..*Not printed.*

61 (9*e*). Return to an Order of the House of the 9th December, 1912, for a copy of all complaints and charges made against Dan. A. McInnes, postmaster at Georgeville, Antigonish County, Nova Scotia, and of all letters, telegrams, and correspondence relating in any way to his dismissal, and the appointment of his successor. Presented 28th February, 1913.—*Mr. Chisholm (Antigonish)*.. .. ..*Not printed.*

61 (9*f*). Return to an Order of the House of the 29th January, 1913, for a copy of all charges, letters, correspondence, telegrams and other documents relating to the dismissal of E. A. Asker, harbour master at Campbellton. Presented 3rd March, 1913.—*Mr. Reid (Restigouche)*.. .. ..*Not printed.*

61 (9*g*). Return to an Order of the House of the 10th February, 1913, for a copy of all papers, letters, documents and orders relative to the dismissal of Fred Shultz as caretaker of the armouries at Kentville, Nova Scotia, and of the appointment of William Shoop in his place and also for a statement of the stores in said armouries in the years 1910, 1911, 1912, respectively, and for a copy of all orders and regulations relative to the duties of such caretaker. Presented 3rd March, 1913.—*Mr. Macdonald. Not printed.*

61 (9*h*). Return to an Order of the House of the 29th January, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Dr. Freeman O'Neil, from the Marine Hospital a Louisburg, Cape Breton South, N.S., and of evidence taken and reports of investigation held by H. P. Duchemin, in regard to the same. Presented 10th March, 1913.—*Mr. Carroll*..*Not printed.*

CONTENTS OF VOLUME 27—*Continued.*

61 (*9i*). Return to an Order of the House of the 9th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Leon N. Poirier, wharfinger at Descouse, Richmond County, N.S. Presented 10th March, 1913.—*Mr. Kyte*.. .. ..*Not printed.*

61 (*9j*). Return to an Order of the House of the 10th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Norman L. Trefry, shipping master at Yarmouth, County of Yarmouth, N.S., and the same information regarding the appointment of Mr. Trefry's successor Presented 10th March, 1913.—*Mr. Law*.. .. ..*Not printed.*

61 (*9k*). Return to an Order of the House of the 15th January, 1913, for a copy of all papers, documents, correspondence, &c., relating to the dismissal of James Amereault, lighthouse keeper at New Edinburgh, Digby County, N.S. Presented 10th March, 1913.—*Mr. McLean (Halifax)*.. .. ..*Not printed*

61 (*9l*). Return to an Order of the House of the 29th January, 1913, for a copy of all papers, documents, evidence, reports, letters, correspondence, &c., relating to the dismissal of H. B. Manley, a clerk in the Dominion Lands Office at Saskatoon. Presented 10th March, 1913.—*Mr. McCraney*.. .. ..*Not printed.*

61 (*9m*). Return to an Order of the House of the 29th January, 1913, for a copy of all correspondence, letters, telegrams, papers and other documents in connection with the dismissal of John Spicer, senior assistant of the Moosejaw Land Agency. Presented 10th March, 1913.—*Mr. Knowles*.. .. ..*Not printed.*

61 (*9n*). Return to an Order of the House of the 29th January, 1913, for a copy of all papers, letters, telegrams and other documents respecting the dismissal of Robert Pragnall from the position of agent of the Dominion Land Office at Swift Current and the appointment of his successor. Presented 10th March, 1913.—*Mr. Knowles.* *Not printed.*

61 (*9o*). Return to an Order of the House of the 29th January, 1913, for a copy of all papers, documents, evidence, reports, letters, correspondence, &c., relating to the dismissal of G. M. Ullyot, a clerk in the Dominion Lands Office at Saskatoon. Presented 10th March, 1913.—*Mr. McCraney*.. .. ..*Not printed.*

61 (*9p*). Return to an Order of the House of the 9th December, 1912, for a return showing the detail and number of dismissals from public offices by the present government to this date in the riding of Saskatoon, with the names of the dismissed occupants, the reasons for their dismissals, the complaints against such officials, and all correspondence with respect to the same, and of all reports of investigations, in cases where such were held. Presented 17th March, 1913.—*Mr. McCraney*.. .. ..*Not printed*

61 (*9q*). Return to an Order of the House of the 17th February, 1913, for a copy of all letters, petitions, telegrams, complaints, evidence, reports, affidavits and other documents in the Department of Inland Revenue, respecting the dismissal of J. N. Poirier, Collector of Excise at Victoriaville, County of Arthabaska, and the names of the witnesses interested, with a copy of the evidence and a statement of expenses of the said inquiry. Presented 17th March, 1913.—*Mr. Brouillard*.. .. ..*Not printed.*

61 (*9r*). Return to an Order of the House of the 15th January, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relative to the dismissal of John G. Morrison, fishery inspector at Englishtown, in the riding of North Cape Breton and Victoria, and of the evidence taken and report of investigation held by H. P. Duchemin, in regard to same, and a detailed statement of the expenses of such investigation. Presented 18th March, 1913.—*Mr. Kyte*.. .. ..*Not printed*

CONTENTS OF VOLUME 27—*Continued.*

61 (9*s*). Return to an Order of the House of the 29th January, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Edward Landry, lightkeeper, Petite de Grat, Richmond County, N.S., and of all evidence taken and report of investigation held by H. P. Duchemin, in regard to the same; also a detailed statement of the expenses of such investigation. Presented 18th March, 1913.—*Mr. Kyte*.. .. ..*Not printed.*

61 (9*t*). Return to an Order of the House of the 27th January, 1913, for a copy of all documents, petitions, letters, correspondence, inquiries and reports concerning the dismissal of Evariste Talbot, employed in the general freight office of the Intercolonial. Presented 18th March, 1913.—*Mr. Lapointe (Kamouraska)*......*Not printed*

61 (9*u*). Return to an Order of the House of the 29th January, 1913, for a copy of all letters, petitions, telegrams, complaints, evidence, reports and other papers and documents in the possession of the Department of Railways or any department of the government, relating to the dismissal of Philip H. Ryan, an employee of the Intercolonial railway at Mulgrave, N.S., and if there was an investigation, the names of all witnesses examined, a copy of the evidence, and a detailed statement of the expenses of such investigation. Presented 18th March, 1913.—*Mr. Sinclair*..*Not printed.*

61 (9*v*). Return to an Order of the House of the 3rd February, 1913, for a return showing how many postmasters and other post office employees were removed from office respectively, from the 1st of July, 1896, to the 1st of October, 1911, and the number in each province; and from the 10th of October, 1911, up to date, with the number in each province; also the number of post offices in operation in each province on the 1st July, 1896. Presented 26th March, 1913.—*Mr. Rainville*..............*Not printed.*

61 (9*w*). Return to an Address to His Royal Highness the Governor General of the 3rd February, 1913, for a copy of all orders in council, and of all letters, telegrams, complaints, petitions and of all other documents of any kind, in the possession of the government, or of any department or official thereof, in any way relating to or concerning the dismissal of Dr. Clarence T. Campbell, post office inspector at London, Ontario. Presented 26th March, 1913.—*Mr. Ross*........................*Not printed.*

61 (9*x*). Return to an Order of the House of the 9th December, 1912, for a return showing the number of postmasters that have been dismissed in the County of Missisquoi since 1st October, 1911, the names of the postmasters who have been appointed to succeed them, the cause of the dismissals and a copy of all complaints and correspondence with respect to the same, and of all reports of investigations where such have been held. Presented 26th March, 1913.—*Mr. Kay*..............................*Not printed.*

61 (9*y*). Return to an Order of the House of the 27th January, 1913, for a copy of all letters, petitions, telegrams, complaints, evidence, reports and other papers and documents in the possession of the Post Office Department, regarding any change in any post office or postmastership in Bonaventure County, between 5th December, 1912, up to date. Presented 26th March, 1913.—*Mr. Marcil (Bonaventure)*......*Not printed.*

61 (9*z*). Return to an Address to His Royal Highness the Governor General of the 9th December, 1912, for a copy of all papers, documents, correspondence, orders in council, &c., relative to the dismissal of S. A. Johnson, late postmaster at Petite Rivière, Lunenburg County, N.S. Presented 26th March, 1913.—*Mr. MacLean (Halifax)*. *Not printed.*

CONTENTS OF VOLUME 27—*Continued.*

61 (10*a*). Return to an Order of the House of the 9th December, 1912, for a copy of all charges, correspondence, letters, telegrams, and other documents relative to the dismissal of Murdock McKenzie, postmaster at Millville Boulardarie, Nova Scotia, in the riding of North Cape Breton and Victoria. Presented 26th March, 1913.—*Mr. McKenzie* ....*Not printed.*

61 (10*b*). Return to an Order of the House of the 9th December, 1912, for a copy of all documents, correspondence and telegrams relating to the dismissal of James Stewart, postmaster at Middleton, Antigonish County, and the appointment of his successor. Presented 26th March, 1913.—*Mr. Chisholm (Antigonish)*...................*Not printed*

61 (10c). Return to an Order of the House of the 9th December, 1912, for a copy of all correspondence, telegrams and reports relating to the dismissal of Lauchlin McNeil, postmaster at New France, County of Antigonish, and the appointment of his suc- Presented 26th March, 1913.—*Mr. Chisholm (Antigonish)*.................*Not printed.*

61 (10*d*). Return to an Order of the House of the 9th December, 1912, for a copy of all charges, correspondence, letters, telegrams, and other documents relative to the dismissal of Frank Dunlop, postmaster at Groves Point, Nova Scotia, in the riding of North Cape Breton and Victoria, and of the evidence taken and report of investigation held by H. P. Duchemin, in regard to same, and a detailed statement of the expense of such investigation. Presented 26th March, 1913.—*Mr. McKenzie.* *Not printed.*

61 (10*e*). Return to an Order of the House of the 10th December, 1912, for a copy of all letters, telegrams, complaints, petitions and other documents relating to the investigation of A. W. Salsman, postmaster at Middle Country Harbour, N.S., and to the appointment of his successor. Presented 26th March, 1913.—*Mr. Sinclair.* *Not printed.*

61 (10*f*). Return to an Order of the House of the 9th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Richard Conroy, postmaster at Cross Roads, County Harbour, Guysborough County, N.S., and of all evidence taken and report of investigation held by H. P. Duchemin, in regard to the same; also a detailed statement of the expenses of such investigation. Presented 26th March, 1913.—*Mr. Sinclair*................*Not printed.*

61 (10*g*). Return to an Order of the House of the 9th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Abner Carr, postmaster at St. Francis Harbour, Guysborough County, N.S., and of all evidence taken and report of investigation held by H. P. Duchemin, in regard to the same; also a detailed statement of expenses of such investigation. Presented 26th March, 1913.—*Mr. Sinclair*......................................*Not printed.*

61 (10*h*). Return to an Order of the House of the 11th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Parker Sangster, postmaster, Upper New Harbour, Guysborough County, NS., and of all evidence taken and report of investigation held by H. P. Duchemin, in regard to the same; also a detailed statement of the expenses of such investigation. Presented 26th March, 1913.—*Mr. Sinclair*..............................*Not printed.*

61 (10*i*). Return to an Address to His Royal Highness the Governor General of the 4th December, 1912, for a copy of all correspondence, orders in council and all other papers or documents in any way relating to the dismissal of Alexander Marion, from the position of postmaster at Rockland, Ontario. Presented 26th March, 1913.—*Mr. Murphy* ....*Not printed.*

CONTENTS OF VOLUME 27—*Continued.*

61 (10*j*). Return to an Order of the House of the 4th December, 1912, for a copy of the evidence taken and the report made by each commissioner appointed since 1st of November, 1911, to conduct an investigation into charges of offensive partizanship made against postmasters in the County of Russell. Presented 26th March, 1913.—*Mr. Murphy* ....*Not printed.*

61 (10*k*). Return to an Order of the House of the 9th December, 1912, for a copy of all papers, documents, evidence, reports, findings and correspondence, relating to the dismissal of Mathew Boutilier, recently postmaster at Mushaboom, Halifax County, N.S. Presented 26th March, 1913.—*Mr. MacLean (Halifax)*....................*Not printed*

61 (10*l*). Return to an Order of the House of the 29th January, 1913, for a return showing the names of the postmasters in the County of Joliette, who have been dismissed from 1896 to September, 1911; their respective parishes; dates of their dismissals; the reasons alleged; whether an inquiry was made in each case; on whose recommendation in each case the dismissals were made; names of successors in each case, and on whose recommendation were they appointed. Presented 26th March. 1913.—*Mr. Guilbault.* *Not printed.*

61 (10*m*). Return to an Order of the House of the 29th January, 1913, for a copy of all papers, documents, evidence, reports, letters, correspondence, &c., relating to the dismissal of T. Doane Crowell, postmaster at Shag Harbour, Shelburne County, N.S.. and the appointment of his successor. Presented 26th March, 1913.—*Mr. Law.* *Not printed.*

61 (10*n*). Return to an Order of the House of the 22nd January, 1913, for a return showing the postmasters who have been dismissed in the County of Vaudreuil, the dates of their appointment, the cause of their dismissal and by whom their dismissal was requested. Presented 26th March, 1913.—*Mr. Boyer*......................*Not printed.*

61 (10*o*). Return to an Order of the House of the 29th January, 1913, for a copy of all papers, documents, letters, correspondence, &c., relating to the dismissal of Mrs. Spinney, postmistress at Upper Port La Tour, Shelburne County, N.S. Presented 26th March, 1913.—*Mr. Law*................. ....*Not printed.*

61 (10*p*). Return to an Order of the House of the 29th January, 1913, for a return showing the number of postmasters dismissed in the County of Rimouski since 21st September, 1911, giving their names. Presented 26th March, 1913.—*Mr. Lapointe (Kamouraska)* ....*Not printed.*

61 (10*q*). Return to an Order of the House of the 4th December, 1912, for a return showing the detail and number of dismissals from public offices by the present government to this date in the riding of Wright, giving the names of the dismissed occupants, the reasons for their dismissal, the complaints against such officials, and a copy of all correspondence with respect to the same, with all reports of investigations where such were held. Presented 27th March, 1913.—*Mr. Devlin*....................*Not printed*

61 (10*r*). Return to an Order of the House of the 29th January, 9113, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of John R. McLennan, janitor of the public building at Inverness Town, Inverness County, Nova Scotia, and of the evidence taken and report of investigation held by Mr. H. P. Duchemin, in regard to the same; also a detailed statement of the expenses of such investigation. Presented 28th March, 1913.—*Mr. Chisholm (Inverness)*............ ....*Not printed.*

CONTENTS OF VOLUME 27—*Continued.*

61 (10*s*). Return to an Order of the House of the 29th January, 1913, for a copy of all letters, and other documents relating to the dismissal of James Arbuckle, caretaker of the public buildings at Pictou, and the appointment of two successors in his stead. Presented 28th March, 1913.—*Mr. Macdonald*................................*Not printed.*

61 (10*t*). Return to an Order of the House of the 9th December, 1912, for a copy of all charges, correspondence, letters, telegrams, and other documents relative to the dismissal of Mary Dunlop, telegraph operator at Groves Point, Cape Breton County, Nova Scotia, in the riding of North Cape Breton and Victoria. Presented 28th March, 1913.—*Mr. McKenzie* ....*Not printed.*

61 (10*u*). Return to an Order of the House of the 4th December, 1912, for a return showing the foremen employed at the various public works in the County of Gloucester on the 21st of September, 1911, who have been dismissed since by the present administration, containing their names, reasons of dismissal, nature of the charges made against them, also a copy of all correspondence connected with the same and reports of inquiries, in cases where such inquiries have been instituted. Presented 28th March, 1913.—*Mr. Turgeon*............................. ....*Not printed*

61 (10*v*). Return to an Order of the House of the 3rd February, 1913, for a copy of all letters, telegrams, papers and documents relative to the dismissal of Captain Lyons. of the dredge *Northumberland*, and the appointment of his successor. Presented 28th March, 1913.—*Mr. Macdonald*................... ....*Not printed.*

61 (10*w*). Return to an Address to His Royal Highness the Governor General of the 4th December, 1912, for a copy of all correspondence, orders in council and all other papers or documents in any way relating to the dismissal of James McCartin, from the position of inspector of the concrete work forming part of the contract for the construction of the The Plaza at the City of Ottawa Presented 28th March, 1913.—*Mr. Murphy* ....*Not printed.*

61 (10*x*). Return to an Order of the House of the 29th January, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Robert C. Morrison, postmaster at St. Peters, Richmond County, N.S., and of the evidence taken and report of investigation held by H. P. Duchemin, in regard to the same; also a detailed statement of the expenses of such investigation, together with a copy of all recommendations, letters, telegrams and other papers relating to the appointment of Mr. Morrison's successor. Presented 31st March, 1913.—*Mr. Kyte.* *Not printed*

61 (10*y*). Return to an Order of the House of the 9th December, 1912, for a copy of all charges, correspondence, letters, telegrams, and other documents relative to the dismissal of Richard Dugas, storm signal attendant at Alder Point, Nova Scotia, in the riding of North Cape Breton and Victoria. Presented 4th April, 1913.—*Mr. McKenzie.* *Not printed.*

61 (10*z*). Return to an Order of the House of the 20th January, 1913, for a return showing the names of all officials of the Marine and Fisheries Department who have been dismissed or removed in the County of Pictou, the reasons of the same, the evidence taken at any investigation held in regard to them, and the reports of said investigations, the names of their successors, and a copy of all letters, charges, complaints and recommendations from any person or persons in regard to the said removals or dismissals, or in regard to the appointment of their successors. Presented 4th April 1913.—*Mr. Macdonald*...................... ....*Not printed*

CONTENTS OF VOLUME 27—*Continued.*

61 (11*a*). Return to an Order of the House of the 3rd March, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of William L. Munro, lightkeeper at White Head, Guysborough County, N.S., and of all evidence taken and report of investigation held by H. P. Duchemin, in regard to the same; also a detailed statement of the expenses of such investigation. Presented 4th April, 1913.—*Mr. Sinclair*..................................*Not printed.*

61 (11*b*). Return to an Order of the House of the 29th January, 1913, for a copy of all letters, telegrams, correspondence, reports and documents touching the dismissals of Alexander R. McAdam as fishery officer for the County of Antigonish, N.S., and the appointment of his successor. Presented 4th April, 1913.—*Mr. Chisholm (Antigonish).* *Not printed.*

61 (11*c*). Return to an Order of the House of the 19th February, 1913, for a copy of all letters, petitions, telegrams, complaints, evidence, reports and other papers and documents in the possession of the Marine and Fisheries Department, or any department of the government, relating to the dismissal of Stephen C. Richard, lightkeeper at Charlos Cove, N.S., and if there was an investigation, the names of all witnesses examined, a copy of the evidence, and a detailed statement of the expenses of such investigation. Presented 4th April, 1913—*Mr. Sinclair*....................*Not printed.*

61 (11*d*). Supplementary to an Order of the House of the 7th February, 1912, for a return showing for each department of the government the names, post office addresses, offices, employment, and salaries of all persons employed either in the inside or outside service thereof, and of such persons not in the Civil Service, employed by the government in any department, on the tenth day of October, 1911, who have been removed from office or employment by dismissal; specifying in each case the manner of and grounds of such dismissals and the length of notice given to the persons removed, and also indicating in each case whether an inquiry was or was not held prior to such dismissal. Presented 7th April, 1913.—*Mr. Kyte*...........................*Not printed.*

61 (11*e*). Return to an Order of the House of the 7th December, 1912, for a return showing the public officers removed by the present government in the district of Lotbinière, with the names and duties of such persons, the reasons of their dismissal. the nature of the complaints made against them, also a copy of all correspondence relating thereto and reports of inquiries in the cases where such inquiries have been held. Presented 9th April, 1913.—*Mr. Fortier*............................*Not printed*

61 (11*f*). Return to an Order of the House of the 29th January, 1913, for a copy of all complaints and charges made against Miss Gertie Lewis, as postmistress at Main-a dieu, Cape Breton South, N.S., and of all letters, telegrams and correspondence relating in any way to her dismissal and the appointment of a successor. Presented 9th April, 1913.—*Mr. Carroll* ....*Not printed.*

61 (11*g*). Return to an Order of the House of the 11th December, 1912, for a copy of all correspondence, letters, telegrams and other documents relating to the dismissal of John Taylor, late postmaster at Carnduff, Sask., and of all reports of investigation held, &c. Presented 9th April, 1913.—*Mr. Turriff*.........................*Not printed.*

61 (11*h*). Return to an Order of the House of the 29th January, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Frederick Mitchell, from the position of postmaster at Dominion, Cape Breton South, N.S., and of the evidence taken and reports of investigation held by H. P. Duchemin, in regard to the same. Presented 9th April, 1913.—*Mr. Carroll.* *Not printed.*

CONTENTS OF VOLUME 27—*Continued.*

61 (11*i*). Return to an Order of the House of the 29th January, 1913, for a copy of all papers, letters, telegrams and other correspondence relating to the dismissal of Thomas J. Sears, postmaster at Lochaber, N.S., and the appointment of his successor; of the evidence taken, and of the report thereon made by Commissioner Duchemin, on the charges, if any, made against the dismissed postmaster. Presented 9th April, 1913.—*Mr. Chisholm (Antigonish)*.. .. ..*Not printed.*

61 (11*j*). Return to an Order of the House of the 29th January, 1913, for a copy of all correspondence, letters, telegrams, papers and other documents in connection with the dismissal of the postmaster at Alsask, Saskatchewan. Presented 9th April, 1913.—*Mr. Knowles*..*Not printed*

61 (11*k*). Return to an Order of the House of the 3rd March, 1913, for a copy of all letters, telegrams, instructions and other papers and documents in the possession of the Department of Marine and Fisheries, or any officer thereof, relating to the dismissal or appointment of fishery guardians or fishery officers, in the County of Guysborough, N.S., bearing date since the 10th day of October, 1911. Presented 9th April, 1913.—*Mr. Sinclair*..*Not printed*

61 (11*l*). Return to an Order of the House of the 11th December, 1912, for a copy of all complaints and charges made against John R. Morrison, postmaster at Oban, Richmond County, N.S., and of all letters, telegrams and correspondence relating in any way to his dismissal, and the appointment of a successor. Presented 14th April, 1913.—*Mr. Kyte*..*Not printed.*

61 (11*m*). Return to an Order of the House of the 11th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of A. G. McDonald, postmaster of North East Margaree, Inverness County, Nova Scotia, and of the evidence taken and report of investigation held by H. P. Duchemin, in regard to the same; also a detailed statement of the expenses of such investigation. Presented 14th April, 1913.—*Mr. Chisholm (Inverness)*..*Not printed.*

61 (11*n*). Return to an Order of the House of the 9th December, 1912, for a return showing in detail the number of dismissals from public office by the present government to this date, in the constituency of Qu'Appelle, with the names of the dismissed officers, and the reason for their dismissal, the complaints against such officials and a copy of all correspondence, petitions, papers and documents with respect to the same, and of all notes of evidence and reports of investigations in cases where they have taken place. Presented 14th April, 1913.—*Mr. Thomson (Qu'Appelle)*..........*Not printed*

61 (11*o*). Return to an Order of the House of the 29th January, 1913, for a copy of all letters, petitions, telegrams, complaints, evidence, reports and other papers and documents in the possession of the Department of Marine and Fisheries or any department of the government, relating to the dismissal of David Reid, fishery officer at Port Hilford, N.S., and if there was an investigation, the names of the witnesses examined, a copy of the evidence, and a detailed statement of the expenses of each investigation. Presented 15th April, 1913.—*Mr. Sinclair*..............................*Not printed.*

61 (11*p*). Return to an Order of the House of the 15th January, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Robert Musgrave, postmaster at North Sydney, in the riding of North Cape Breton and Victoria, and of the evidence taken and report of investigation held by H. P. Duchemin, in regard to same, and a detailed statement of the expenses of such investigation. Presented 15th April, 1913.—*Mr. McKenzie*..................*Not printed.*

CONTENTS OF VOLUME 27—*Continued.*

61 (11*q*). Return to an Order of the House of the 11th December, 1912. for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of A. D. Archibald, postmaster at Glenelg, Guysborough County, N.S., and of all evidence taken and report of investigation held by H. P. Duchemin in regard to the same; also a detailed statement of the expenses of such investigation. Presented 15th April, 1913.—*Mr. Chisholm (Inverness)*..............................*Not printed*

61 (11*r*). Return to an Order of the House of the 11th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Leon N. Poirier, postmaster at Descouse, Richmond County, N.S., and of the evidence taken and of the reports of investigation held by H. P. Duchemin in regard to the same and a detailed statement of the expenss of such investigation; and a copy of all papers relating to the appointment of his successor. Presented 15th April, 1913.—*Mr. Kyte*....................... ....*Not printed.*

61 (11*s*). Return to an Order of the House of the 11th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Norman McAskill, postmaster at Framboise, Richmond County, N.S., and of the evidence taken and of the report of investigation held by H. P. Duchemin in regard to the same, and a detailed statement of the expenses of such investigation; and a copy of all papers relating to the appointment of his successor. Presented 15th April, 1913.—*Mr. Kyte*....................... ....*Not printed.*

61 (11*t*). Return to an Order of the House of the 11th December, 1912, for a copy of all papers, documents and correspondence relating to the dismissal of A. T. Doucet, postmaster and collector of customs at Salmon River, Digby County, N.S. Presented 15th April, 1913.—*Mr. Maclean (Halifax)*.. .. ..*Not printed.*

61 (11*u*). Return to an Order of the House of the 29th January, 1913, for a copy of all complaints and charges made against Mrs. Annie Gallivan, as postmistress at Whitney Pier, Cape Breton South, Nova Scotia, and of all letters, telegrams and correspondence relating in any way to her dismissal and the appointment of a successor. Presented 15th April, 1913.—*Mr. Carroll*..................................*Not printed.*

61 (11*v*). Return to an Order of the House of the 29th January, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Wm. J. Paquet, postmaster at Souris, P.E.I. Presented 15th April, 1913.—*Mr. Hughes (Kings, P.E.I.)*.. .. ..*Not printed.*

61 (11*w*). Return to an Order of the House of the 27th January, 1913, for a copy of all documents, correspondence, petitions and recommendations, &c., relating to the dismissal of the postmaster at St. Anaclet, County of Rimouski, during the year 1912, and of the appointment of his successor. Presented 15th April, 1913.—*Mr. Lapointe (Kamouraska)*.. .. ..*Not printed*

61 (11*x*). Return to an Order of the House of the 29th January, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of George Gunn, postmaster at French Village, Prince Edward Island. Presented 15th April, 1913.—*Mr. Hughes (Kings, P.E.I.)*.. .. ..*Not printed.*

61 (11*y*). Return to an Order of the House of the 4th December, 1912, for a return showing the detail and number of dismissals from public offices by the present government to this date in the riding of Mackenzie, together with the names of the dismissed occupants, the reasons for their dismissal, the complaints against such officials, and a copy of all correspondence with respect to the same, and of all reports of investigations, where any such were held. Presented 15th April, 1913.—*Mr. Cash*..*Not printed.*

CONTENTS OF VOLUME 27—*Continued.*

61 (11*z*). Return to an Order of the House of the 7th April, 1913, for a copy of all charges investigated by Commissioner W. J. Code, and also of the evidence taken and the report made by the said commissioner. Presented 16th April, 1913.—*Mr. Murphy.* *Not printed.*

61 (12*a*). Return to an Order of the House of the 29th January, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of D. F. McLean, fishery overseer at Port Hood, Inverness County, N.S., and of the evidence taken and report of investigation held by H. P. Duchemin, in regard to the same; also a detailed statement of the expenses of such investigation. Presented 16th April, 1913.—*Mr. Chisholm (Inverness)*........................*Not printed*

61 (12*b*). Return to an Order of the House of the 11th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of J. Scott Nelson, postmaster at Louisdale, Richmond County, N.S., and ot the evidence taken and report of investigation held by H. P. Duchemin, in regard to the same, and a detailed statement of the expenses of such investigation; and a copy of all papers relating to the appointment of his successor. Presented 16th April, 1913. —*Mr. Kyte*.......................... ....*Not printed*

61 (12*c*). Return to an Order of the House of the 29th January, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Joseph McMullen, from the post office at Bridgeport, Cape Breton South, Nova Scotia, and of evidence taken and reports of investigation held by H. P. Duchemin, in regard to the same. Presented 16th April, 1913.—*Mr. Carroll....Not printed.*

61 (12*d*). Return to an Order of the House of the 11th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Frederick A. Martell, postmaster at L'Ardoise, Richmond County, N.S., and of the evidence taken and of the reports of investigation held by H. P. Duchemin, in regard to the same, and a detailed statement of the expenses of such investigation; and a copy of all papers relating to the appointment of his successor. Presented 16th April, 1913.—*Mr. Kyte*............................ ....*Not printed.*

61 (12*e*). Return to an Order of the House of the 11th December, 1912, for a copy of all representations, statements and complaints as to political activity made against John A. Macdonald, postmaster at McArras Brook, Antigonish County, and of all correspondence relating to the charges made against him and of the report of Commissioner Duchemin on said charges. Presented 16th April, 1913.—*Mr. Chisholm (Antigonish)*............... ....*Not printed*

61 (12*f*). Return to an Address to His Royal Highness the Governor General of the 7th December, 1911, for a copy of all papers, correspondence and orders in council in connection with and relating to the dismissal from office of public officials from each of the departments of government since the 1st day of October last past, including both Inside and Outside Service. Presented 18th April, 1913.—*Mr. Carvell......Not printed.*

61 (12*g*). Return to an Address to His Royal Highness the Governor General of the 3rd March, 1913, for a copy of all papers, documents, correspondence, evidence, order in council, &c., relative to the dismissal of Edward Doucett, sub-collector of customs, Digby County, N.S. Presented 21st April, 1913.—*Mr. McLean (Halifax).* *Not printed.*

61 (12*h*). Return to an Address to His Royal Highness the Governor General of the 3rd March, 1913, for a copy of all papers, documents, correspondence, evidence, orders in council, &c., relative to the dismissal of Mr. LeBlanc, sub-collector of customs, Church Point, Digby County, N.S. Presented 21st April, 1913.—*Mr. McLean (Halifax).* *Not printed*

CONTENTS OF VOLUME 27—*Continued.*

61 (12*i*). Return to an Order of the House of the 19th March, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of John C. Bourinot, chief customs officer at Port Hawkesbury, Inverness County, Nova Scotia, and of the evidence taken and report of investigation held by Mr. H. P. Duchemin, in regard to the same; also a detailed statement of the expenses of such investigation. Presented 21st April, 1913.—*Mr. Chisholm (Inverness).* *Not printed.*

61 (12*j*). Return to an Order of the House of the 31st March, 1913, for a copy of all charges, evidence, correspondence, letters and telegrams in the Department of Railways and Canals since the 21st day of September, 1911, relating to the dismissal of Alexander E. Morrison, Point Tupper, N.S., from the service of the Intercolonial railway, and of all recommendations for the appointment of his successor. Presented 21st April. 1913.—*Mr. Kyte*.. .. ..*Not printed*

61 (12*k*). Return to an Order of the House of the 3rd February, 1913, for a copy of all letters, telegrams, reports and other papers and documents received from the officers of the Canadian Brotherhood of Railway Employees, by the Department of Labour, or of the Department of Railways and Canals, between the 1st day of January, 1912, and the 25th day of January, 1913, relating to investigations and dismissals of employees for political partizanship, and of the replies thereto. Presented 22nd April. 1913.—*Mr. Sinclair*..*Not printed.*

61 (12*l*). Return to an Order of the House of the 31st March, 1913, for a copy of all complaints and charges against James Falconer, of Newcastle, County of Northumberland, New Brunswick, as correspondent of the *Labour Gazette* at Newcastle, and of all letters, telegrams and other correspondence relating in any way to his dismissal and the appointment of a successor. Presented 22nd April, 1913.—*Mr. Loggie..Not printed.*

61 (12*m*). Return to an Order of the House of the 19th March, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of John B. Chisholm, lightkeeper at Port Hastings, Inverness County, Nova Scotia, and the evidence taken and report of investigation held by Mr. H. P. Duchemin, in regard to the same; also a detailed statement of the expenses of such investigation. Presented 24th April, 1913.—*Mr. Chisholm (Inverness)*..........*Not printed.*

61 (12*n*). Return to an Order of the House of the 7th April, 1913, for a copy of all correspondence, telegrams, charges and other documents, relating to the dismissal of Epiphane Nadeau, immigration agent at St. Leonard, Victoria County, N.B. Presented 25th April, 1913.—*Mr. Michaud*.. .. ..*Not printed.*

61 (12*o*). Return to an Order of the House of the 31st March, 1913, for a copy of all charges, correspondence, letters, telegrams, and other documents relative to the dismissal of D. J. Morrison, boatman in the customs service at Big Bras D'or, North Cape Breton and Victoria, N.S., and of the evidence taken and of reports of the investigation held by H. P. Duchemin, in regard to the same, with a detailed statement of expenses of such investigation. Presented 25th April, 1913.—*Mr. McKenzie.* *Not printed*

61 (12*p*). Return to an Order of the House of the 31st March, 1913, for a copy of all charges, correspondence, letters, telegrams, and other documents relative to the dismissal of Rod McLeod, boatman in the customs service at Big Bras D'or, North Cape Breton and Victoria, N.S., and of the evidence taken and of reports of the investigation held by H. P. Duchemin, in regard to the same, with a detailed statement of expenses of such investigation. Presented 25th April, 1913.—*Mr. McKenzie.* *Not printed.*

CONTENTS OF VOLUME 27—*Continued.*

61 (12*q*). Return to an Order of the House of the 11th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of D. McLachlin, postmaster at Marble Mountain, Inverness County, Nova Scotia, and of the evidence taken and report of investigation held by H. P. Duchemin in regard to the same; also a detailed statement of the expenses of such investigation. Presented 25th April, 1913.—*Mr. Chisholm (Inverness)*.. .. ..*Not printed.*

61 (12*r*). Return to an Order of the House of the 11th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Abram LeBlanc, postmaster at West Arichat, Richmond County, N.S., and of the evidence taken and reports of investigation held by H. P. Duchemin in regard to the same and a detailed statement of the expenses of such investigation, and a copy of all papers relating to the appointment of his successor. Presented 25th April, 1913.—*Mr. Kyte*............ ....*Not printed.*

61 (12*s*). Return to an Order of the House of the 11th December, 1912, for a copy of all correspondence, letters, telegrams and other documents relating to the dismissal of Charles J. Lafford, postmaster at Grand Grove, Richmond County, N.S., and of all evidence taken and report of investigation held by H. P. Duchemin in regard to the same; also a detailed statement of the expenses of such investigation. Presented 25th April, 1913.—*Mr. Kyte*..................... ....*Not printed*

61 (12*t*). Return to an Order of the House of the 11th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of W. S. Lawrence, postmaster at Margrave Harbour, Inverness County, Nova Scotia, and of the evidence taken and report of investigation held by H. P. Duchemin. in regard to the same; also a detailed statement of the expenses of such investigation. Presented 25th April, 1913.—*Mr Chisholm (Inverness)*.. .. ..*Not printed.*

61 (12*u*). Return to an Order of the House of the 11th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of John K. McDonald, postmaster at Whycocomagh, Inverness County, Nova Scotia, and of the evidence taken and report of investigation held by H. P. Duchemin, in regard to the same; also a detailed statement of the expenses of such investigation. Presented 25th April, 1913.—*Mr. Chisholm (Inverness)*....................*Not printed*

61 (12*v*). Return to an Order of the House of the 31st March, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Captain P. J. Wilcox, from the customs office at Louisburg, Cape Breton South, Nova Scotia, and of evidence taken and reports of investigations held by H. P Duchemin, in regard to the same. Presented 29th April, 1913.—*Mr. Carroll.*
Not printed

61 (12*w*). Return to an Order of the House of the 31st March, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of M. J. McKennon, from the customs office at Glace Bay, Cape Breton South, Nova Scotia, and of evidence taken and reports of investigation held by H. P. Duchemin, in regard to the same. Presented 29th April, 1913.—*Mr. Carvell*......*Not printed*

61 (12*x*). Return to an Order of the House of the 9th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relative to the dismissal of Captain John Arsenault, telegraph line repairer at Alder Point, Cape Breton, in the riding of North Cape Breton and Victoria, and of the evidence taken and report of investigation held by H. P. Duchemin, in regard to same, and a detailed statement of the expenses of such investigation. Presented 29th April, 1913.—*Mr. McKenzie.*
Not printed.

CONTENTS OF VOLUME 27—*Continued.*

61 (12*y*). Return to an Order of the House of the 9th December, 1912, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Mrs. John Arsenault, telegraph operator at Alder Point, N.S., in the riding of North Cape Breton and Victoria. Presented 2nd May, 1913.—*Mr. McKenzie.* *Not printed*

61 (12*z*). Return to an Order of the House of the 29th January, 1913, for a copy of all letters, petitions, telegrams, complaints, evidence, reports and other papers and documents in the possession of the Department of Railways and Canals or any department of the government, relating to the dismissal of A. J. Wilkinson, at Mulgrave, N.S and if there was an investigation, the names of all witnesses examined and a detailed statement of the expenses of such investigation. Presented 2nd May, 1913.—*Mr. Sinclair*...*Not printed.*

61 (13*a*). Charges made against Mr. H. A. Bayfield, superintendent of dredging, British Columbia.—(*Senate*).. .. ..*Not printed.*

61 (13*b*). Return to an Order of the House of the 31st March, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of H. G. McKay, lighthouse keeper at Bird Island, Big Bras D'or, North Cape Breton and Victoria, and of the evidence taken, and of reports of the investigation held by H. P. Duchemin, in regard to the same, with a detailed statement of expenses of such investigation. Presented 5th May, 1913.—*Mr. McKenzie*..........*Not printed.*

61 (13*c*). Return to an Order of the House of the 10th March, 1913, for a copy of all reports, charges, and correspondence in the office of the Department of Marine and Fisheries relating to charges of political partizanship against Michael O'Brien, light-keeper at Bear Island, Richmond County, N.S., and of the instructions issued to H. P. Duchemin, commissioner, to investigate the same together with the Commissioner's report and finding thereon, and his expenses of holding such investigations. Presented 7th May, 1913.—*Mr. Kyte*...*Not printed.*

61 (13*d*). Return to an Order of the House of the 17th February, 1913, for a copy of all correspondence, letters, telegrams, reports, recommendations and other documents bearing on or having relation to the dismissal of J. H. Leduc, as medical port officer of the port of Three Rivers, P.Q. Presented 7th May, 1913.—*Mr. Bureau*..*Not printed.*

61 (13*e*). Return to an Order of the House of the 29th January, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Patrick Shea, postmaster at Tompkinsville, Guysborough County, N.S. Presented 7th May, 1913.—*Mr. Sinclair*...*Not printed.*

61 (13*f*). Return to an Order of the House of the 29th January, 1913, for a copy of all complaints and charges made against Elias Rawding, postmaster at Clementsport. Annapolis County, N.S., and of all letters, petitions, telegrams, and other correspondence relating in any way to his dismissal and the appointment of a successor. Presented 7th May, 1913.—*Mr. Sinclair*...*Not printed.*

61 (13*g*). Return to an Order of the House of the 29th January, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Charles McLean, postmaster at Strathlorne, Inverness County, Nova Scotia Presented 7th May, 1913.—*Mr. Chisholm* (*Inverness*).. .. ..*Not printed.*

61 (13*h*). Return to an Order of the House of the 29th January, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Angus R. McDonald, postmaster at Broad Cove Chapel, Inverness County. Nova Scotia. Presented 7th May, 1913.—*Mr. Chisholm* (*Inverness*).. ..*Not printed.*

CONTENTS OF VOLUME 27—*Continued.*

61 (13*i*). Return to an Order of the House of the 29th January, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of John McPhail, postmaster at Scotsville, Inverness County, Nova Scotia. Presented 7th May, 1913.—*Mr. Chisholm (Inverness)*....................*Not printed.*

61 (13*j*). Return to an Order of the House of the 29th January, 1913, for a copy of all letters, telegrams, complaints, petitions or other documents of any kind received by the government, or any member or official thereof, relating to the conduct of J. Morgan, one time postmaster of the village of Ailsa Craig. Ontario, as such, and relating to an investigation into said conduct. Presented 7th May, 1913.—*Mr. Ross.* *Not printed*

61 (13*k*). Return to an Order of the House of the 29th January, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Roderick McLean, postmaster at Kenlock, Inverness County, Nova Scotia. Presented 8th May, 1913.—*Mr. Chisholm (Inverness)*......................*Not printed*

61 (13*l*). Return to an Order of the House of the 29th January, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Allan Gillis, postmaster at Gillisdale, South West Margaree, Inverness County, Nova Scotia. Presented 8th May, 1913.—*Mr. Chisholm (Inverness).* *Not printed.*

61 (13*m*). Return to an Order of the House of the 29th January, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of David Shaw, postmaster at Marsh Brook, North East Margaree, Inverness County, Nova Scotia. Presented 8th May, 1913.—*Mr. Chisholm (Inverness).* *Not printed.*

61 (13*n*). Return to an Order of the House of the 29th January, 1913, for a copy of all papers concerning the investigation and dismissal of Helen Joubert, postmistress at Sayabec, Quebec. Presented 8th May, 1913.—*Mr. Lemieux*................*Not printed.*

61 (13*o*). Return to an Order of the House of the 29th January, 1913, for a copy of all correspondence, letters, and telegrams between the Honourable Postmaster General or the Post Office Department, and any person or persons, relative to the dismissal or the request therefor of D. A. Redmond, until recently postmaster at Brinston, Ontario. Presented 8th May, 1913.—*Mr. Graham*..................................*Not printed.*

61 (13*p*). Return to an Order of the House of the 29th January, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Dan. McEachern, postmaster at McEachern's Mills, Broad Cove Chapel, Inverness County, Nova Scotia. Presented 8th May, 1913.—*Mr. Chisholm (Inverness).* *Not printed.*

61 (13*q*). Return to an Order of the House of the 3rd February, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relative to the dismissal of Daniel Dunlop, postmaster at New Campbellton, riding of North Cape Breton and Victoria, N.S., and of the evidence taken and reports of the investigation held by H. P. Duchemin, in regard to same, with a detailed statement of expense of such investigation. Presented 8th May, 1913.—*Mr. McKenzie*.............*Not printed.*

61 (13*r*). Return to an Order of the House of the 15th January, 1913, for a copy of all papers, letters, telegrams, evidence and other documents regarding the dismissal of Arthur Armstrong, postmaster at Greenfield, Carleton County, N.B. Presented 8th May, 1913.—*Mr. Carvell*...*Not printed.*

CONTENTS OF VOLUME 27—*Continued.*

61 (13*s*). Return to an Order of the House of the 3rd February, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relative to the dismissal of Alex. Matheson, postmaster at Boulardarie Centre, north riding Cape Breton and Victoria. Presented 8th May, 1913.—*Mr. McKenzie*............*Not printed.*

61 (13*t*). Return to an Order of the House of the 15th January, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Arthur Talbot, late postmaster at Robertsville, County of Megantic, Province of Quebec. Presented 8th May, 1913.—*Mr. Pacaud*...................*Not printed.*

61 (13*u*). Dismissal of N. C. Lyster, late postmaster at Lloydminster, Sask.—(*Senate*). *Not printed.*

61 (13*v*). Return to an Order of the House of the 2nd April, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of Mrs. Maggie Cameron, postmistress at Achosnach, Inverness County, Nova Scotia. Presented 9th May, 1913.—*Mr. Chisholm (Inverness)*.. .. .. ..*Not printed.*

61 (13*w*). Return to an Order of the House of the 29th January, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of David Fraser, postmaster at North East Margaree, Inverness County, Nova Scotia. Presented 9th May, 1913.—*Mr. Chisholm (Inverness)*.. .. .. ..*Not printed.*

61 (13*x*). Return to an Order of the House of the 29th January, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal and retention of W. Stayley Porter, postmaster, Port Maitland, Yarmouth County, N.S., and of the evidence taken and report of investigation held by Charles Lane, in regard to the same; also a detailed statement of expenses of such investigation. Presented 9th May, 1913.—*Mr. Law*................................*Not printed*

61 (13*y*). Return to an Order of the House of the 29th January, 1913, for a copy of all charges, telegrams and other documents relating to the dismissal of Alex. McQueen, postmaster at Kowstoke, Inverness County, Nova Scotia, and of the evidence taken and report of investigation held by H. P. Duchemin, in regard to the same; also a detailed statement of the expenses of such investigation. Presented 9th May, 1913.—*Mr. Chisholm (Inverness)* .. ..*Not printed.*

61 (13*z*). Return to an Order of the House of the 3rd February, 1913, for a return showing the number of employees of the Department of Public Works who have been dismissed in the County of Berthier since the 21st September, 1911, giving the names of the said employees; if an inquiry was held in each case; on whose recommendation, in each case, these dismissals were made; the names of those appointed successors to these persons and on whose recommendation. Presented 12th May, 1913.—*Mr. Beland* *Not printed.*

61 (14*a*). Return to an Order of the House of the 10th February, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents in connection with the dismissal and retention of Jesse L. Morton, postmaster at Lower Argyle, N.S., and of the evidence taken and report of the investigation held by Mr. Lane, in regard to the same also a detailed statement of the expenses of such investigation. Presented 20th May, 1913.—*Mr. Law*..*Not printed*

61 (14*b*). Return to an Order of the House of the 10th February, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents in connection with the dismissal of Mrs. M. C. Gaudet, postmistress at West Pubnico, Yarmouth County, N.S., and of the evidence taken and report of the investigation held by Mr. Lane, in regard to same, and also a detailed statement of the expenses of such investigation Presented 20th May, 1913.—*Mr. Law*...*Not printed.*

CONTENTS OF VOLUME 27—*Continued.*

61 (14*c*). Return to an Order of the House of the 28th April, 1913, for a copy of all charges, correspondence, telegrams, and other documents relative to the dismissal of John P. McKinnon, section foreman on the Intercolonial railway at Shubenacadie, in the riding of North Cape Breton and Victoria, N.S. Presented 20th May, 1913.—*Mr. McKenzie*.................. ....*Not printed.*

61 (14*d*). Return to an Order of the House of the 15th January, 1913, for a copy of all papers, letters, telegrams, evidence and other documents regarding the dismissal of Mary A. Bohan, as postmistress at Bath, Carleton County, N.B. Presented 21st May, 1913.—*Mr. Carvell*.............................. ....*Not printed.*

61 (14*e*). Return to an Order of the House of the 15th January, 1913, for a copy of all papers, letters, telegrams, evidence and other documents regarding the dismissal of Edward Lafferty, postmaster at Benton, Carleton County, N.B. Presented 21st May, 1913.—*Mr. Carvell* ....*Not printed.*

61 (14*f*). Return to an Order of the House of the 15th January, 1913, for a copy of all papers, letters, telegrams, evidence and other documents regarding the dismissal of Dennis McGaffigan, postmaster at Florenceville, Carleton County, N.B. Presented 21st May, 1913.—*Mr. Carvell*.................. ....*Not printed.*

61 (14*g*). Return to an Order of the House of the 27th January, 1913, for a copy of all correspondence and documents bearing upon any change made or asked for in the employees of the Department of Marine and Fisheries in the County of Bonaventure between 5th December, 1912, up to date. Presented 27th May, 1913.—*Mr. Marcil (Bonaventure)*.. .. ..*Not printed.*

61 (14*h*). Return to an Order of the House of the 15th January, 1913, for a copy of all charges, correspondence, letters, telegrams and other documents relating to the dismissal of J. A. McKenzie. postmaster at Ashfield, Inverness County, N.S. Presented 2nd June, 1913.—*Mr. Chisholm (Inverness)*.. .. ..*Not printed.*

61 (14*i*). Return to an Order of the House of the 29th January, 1913, for a copy of all letters, petitions, telegrams, complaints, reports and other papers and documents in the possession of the Post Office Department, or any department of the government, relating to the dismissal of James Bowles, postmaster at Alder River, N.S., and if there was an investigation, the names of all the witnesses examined, a copy of the evidence, and a detailed statement of the expense of such investigation. Presented 2nd June, 1913.—*Mr. Sinclair*..................... ....*Not printed.*

61 (14*j*). Return to an Order of the House of the 21st April, 1913, for a copy of all correspondence, complaints, reports, recommendations, petitions, certificates and other documents relating to the dismissal of Mr. Edmund Lacroix, as postmaster of the Parish of St. Joseph du Lac, County of Two Mountains, and the appointment of Rodrique Larocque, of the same place as postmaster. Presented 2nd June, 1913.—*Mr. Ethier*......................... ....*Not printed*

61 (14*k*). Return to an Order of the House of the 26th May, 1913, for a copy of all papers, letters, documents, reports and inquiry, relating to the lighthouse keeper of the Parish of Repentigny, County of L'Assomption. Presented 3rd June, 1913.—Mr. *Seguin*.................... ....*Not printed.*

61 (14*l*). Return to an Order of the House of the 16th April, 1913, for a copy of all papers, documents, evidence, reports, &c., relating to the dismissal of B. C. Kanock, late shipping master at Lunenburg, N.S. Presented 4th June, 1913.—*Mr. McLean (Halifax)*. *Not printed.*

CONTENTS OF VOLUME 27—*Continued.*

61 (14*m*). Return to an Order of the House of the 3rd March, 1913, for a copy of all complaints, accusations, correspondence, petitions and telegrams, respecting the dismissal of Ulric Thibaudeau, agent for pilots at Quebec, and of all documents respecting the appointment of his successor, such as petitions, letters of recommendation, &c., and of the evidence and report made after the inquiry held by the inquiring commissioner; and also a detailed statement of the expenses caused by this inquiry. Presented 4th June, 1913.—*Mr. Delisle*....................................*Not printed.*

61 (14*n*). Supplementary return to an Order of the House of the 20th January, 1913, for a return showing the names of all officials of the Marine and Fisheries Department who have been dismissed or removed in the County of Pictou, the reasons of the same, the evidence taken at any investigation held in regard to them, and the reports of said investigations, the names of their successors, and a copy of all letters, charges, complaints and recommendations from any person or persons in regard to the said removals or dismissals, or in regard to the appointment of their successors. Presented 4th June, 1913.—*Mr. Macdonald*...*Not printed.*

61 (14*o*). Return to an Order of the House of the 29th January, 1913, for a copy of all letters, petitions, telegrams, complaints, evidence, reports and other papers and documents in the possession of the Post Office Department, or any department of the government relating to the dismissal of Captain Freeman Myers, postmaster at Cole Harbour, Guysborough County, N.S., and if there was an investigation, the names of all witnesses examined, a copy of the evidence, and a detailed statement of the expenses of such investigation. Presented 4th June, 1913.—*Mr. Sinclair.*
Not printed

61 (14*p*). Return to an Order of the House of the 4th December, 1912, for a return showing all public officers removed by the present government in the district of St. James, Montreal, together with the names and duties of such persons, the reasons of their dismissal, the nature of the complaints brought against them, and a copy of all correspondence relating thereto, and of reports of inquiries in the cases where such have been held. Presented 4th June, 1913.—*Mr. Lapointe (Montreal)*..........*Not printed*

61 (14*q*). Return to an Address to His Royal Highness the Governor General of the 4th December, 1912, for a return showing all the employees of the Dominion government in the constituency of Edmonton, dismissed between 10th of October, 1911, and 21st of November, 1912; the salary being paid to such employee at the time of his dismissal, together with a copy of all correspondence, recommendations to council, orders in council, and all other papers or documents in any way connected with such dismissals. Presented 4th June, 1913.—*Mr. Oliver*...................................*Not printed.*

61 (14*r*). Return to an Order of the House of the 4th December, 1912, for a return showing the names of all officials in the district of Sunbury and Queens, who have been dismissed or removed from office since September, 1911, the reason for such dismissal or removal, the evidence taken at any investigation held in regard to them, the reports upon such investigations, the name of any successor appointed in place of dismissed officials, and a copy of all letters, charges, complaints and recommendations in regard to the said removals or dismissals, or in regard to the appointment of their successors. Presented 4th June, 1913.—*Mr. McLean (Sunbury)*...........*Not printed.*

61 (14*s*). Return to an Order of the House of the 29th January, 1913, for a copy of all letters, petitions, telegrams, complaints, evidence, reports and other papers and documents in the possession of the Department of Marine and Fisheries, or any department of the government relating to the dismissal of Levi Munroe, harbour master at

CONTENTS OF VOLUME 27—*Continued.*

White Head, N.S., and if there was an investigation, the names of all witnesses examined, a copy of the evidence, and a detailed statement of the expenses of such investigation. Presented 4th June, 1913.—*Mr. Sinclair*....................*Not printed.*

61 (14*t*). Return to an Order of the House of the 29th January, 1913, for a copy of all letters petitions, telegrams, complaints, evidence, reports and other papers and documents in the possession of the Post Office Department, or any department of the government, relating to the dismissal of Stanford Langley, postmaster at Isaac Harbour North, N.S., and if there was an investigation the names of all witnesses examined, a copy of the evidence, and a detailed statement of the expenses of such investigation. Presented 5th June, 1913.—*Mr. Sinclair*....................................*Not printed.*

61 (14*u*). Return to an Order of the House of the 24th February, 1913, for a copy of all letters, telegrams, correspondence, charges, evidence, reports, and other documents relating to the dismissal of Hugh R. McAdam as postmaster at Arisaig, N.S., and the appointment of Reverend Daniel L. Macdonald as his successor. Presented 5th June, 1913.—*Mr. Chisholm (Antigonish)*.. *Not printed.*

61 (14*v*). Return to an Order of the House of the 29th January, 1913, for a copy of all letters, petitions, telegrams, complaints, evidence, reports and other papers and documents in the possession of the Post Office Department, or any department of the government, relating to the proposed dismissal of J. J. McNeil, at Grant's Lake, N.S., and if there was an investigation, the names of the witnesses examined and a detailed statement of the expenses of such investigation. Presented 5th June, 1913.—*Mr. Sinclair*...*Not printed.*

61 (14*w*). Return to an Order of the House of the 29th January, 1913, for a copy of all letters, petitions, telegrams, complaints, evidence, reports and other papers and documents in the possession of the Department of Railways and Canals, or any department of the government, relating to the dismissal of Alex. McInnis, car inspector of the Intercolonial railway at Mulgrave, N.S., and if there was an investigation, the names of all witnesses examined, a copy of the evidence, and a detailed statement of the expenses of such investigation. Presented 6th June, 1913.—*Mr. Sinclair*..*Not printed.*

61 (14*x*). Return to an Order of the House of the 28th April, 1913, for a copy of all charges, correspondence, telegrams, and other documents relative to the dismissal of Archibald McDonald, bridge tender on the Intercolonial railway at Grand Narrows, Iona, riding of North Cape Breton and Victoria, N.S. Presented 6th June, 1913.—*Mr. McKenzie*...*Not printed.*

61 (14*y*). Names of all officials dismissed in Shelburne and Queens from 1st December, 1896. —(*Senate*)...*Not printed.*

62. Return to an Order of the House of the 4th December, 1912, for a return showing the number of all contracts cancelled in the County of Bonaventure since the 1st of October, 1911; the names of the contractors, the prices paid to them, the reasons for the cancellation in each case; and a copy of any investigations and reports had into the causes of such cancellations, the names of the new contractors and the prices paid to them in each case. Presented 14th January, 1913.—*Mr. Marcil (Bonaventure).* *Not printed.*

62*a*. Return to an Order of the House of the 5th December, 1912, for a return showing the number of rural mail delivery routes that have been established in Canada since the 1st January, 1912, in each province and county, respectively. Presented 14th January, 1913.—*Mr. Lemieux* ....*Not printed.*

CONTENTS OF VOLUME 27—*Continued.*

62*b*. Return to an Order of the House of the 9th December, 1912, for a copy of all correspondence, letters, telegrams, complaints and other documents relating to the cancelling of the contract for conveying His Majesty's mails, entered into on the 1st day of January, 1912, between the Honourable Postmaster General and Mr. J. C. Beeman, of Guthrie, County of Missisquoi; together with the reason for the cancellation of this contract, the price paid to Mr. Beeman, the name of the present contractor and the price paid to him. Presented by Hon. Mr. Pelletier.—*Mr. Kay*........*Not printed.*

62*c*. Return to an Order of the House of the 11th March, 1912, for a copy of all letters, requests, memorandums, tenders and other documents in the possession of the Post Office Department relating to the calling for tenders and the granting of the contract now in force for the carrying of the mail between Sorel and Ste. Victoire, County of Richelieu. Presented 20th January, 1913.—*Mr. Cardin*....................*Not printed.*

62*d*. Return to an Order of the House of the 4th December, 1912, for a copy of all papers, letters, telegrams, tenders, bonds, agreements, contracts and other documents in the possession of the Post Office Department relating to the letting of the contract for carrying the mails between Heatherton and Guysborough, in the year 1912; and also relating to any temporary agreement entered into prior to the date of letting such contract. Presented 21st January, 1913.—*Mr. Sinclair*................*Not printed*

62*e*. Return to an Order of the House of the 29th January, 1913, for a copy of all letters and other documents relating to the establishment of a rural mail service between Saltsprings and West River Station, in the County of Pictou, in the year 1912. Presented 17th February, 1913.—*Mr. Macdonald*..............................*Not printed.*

62*f*. Return to an Order of the House of the 29th January, 1913, for a copy of all letters, and other documents relating to the establishment of a rural mail delivery service between Merigonish Station, County of Pictou, and Arisaig, in the County of Antigonish, in the year 1912. Presented 17th February, 1913.—*Mr. Macdonald.* *Not printed*

62*g*. Return to an Order of the House of the 29th January, 1913, for a copy of all correspondence, letters, telegrams and reports regarding the termination of H. D. Decoste's contract for carrying the mails between Linwood Station and Linwood post office and the making of a new contract with D. Delorey, from the 1st January, 1913. Presented 28th February, 1913.—*Mr. Chisholm (Antigonish)*........................*Not printed.*

62*h*. Return to an Order of the House of the 4th December, 1912, for a copy of all correspondence, complaints, recommendations, telegrams and reports bearing on the railway mail service in Bonaventure County from October, 1911, up to date, and on the appointment and dismissal of officers in such connection, with the names, residences, salaries and duties, as well as of all documents bearing on the suspension of the railway mail service during the period mentioned, as well as a copy of all documents referring to agreements made to meet such a contingency during the coming winter. Presented 25th March, 1913.—*Mr. Marcil (Bonaventure)*....................*Not printed.*

62*i*. Return to an Order of the House of the 9th December, 1912, for a copy of all tenders received and the contracts entered into for the carrying of the mails between St. Andrew and Beauley, County of Antigonish, and of all letters, telegrams and correspondence on file in the Post Office Department containing any recommendation or advice regarding the awarding of such contract, or in any way referring thereto. Presented 26th March, 1913.—*Mr. Chisholm (Antigonish)*......................*Not printed.*

CONTENTS OF VOLUME 27—*Continued.*

62*j*. Return to an Order of the House of the 3rd February, 1913, for a return showing what changes, if any, have been made in the contracts for the carrying of the mails in the County of Berthier, since the 21st September, 1911; in what parishes, on what date, and for what reason; to whom have the new contracts been granted, and if a tender was asked for in each case. Presented 14th April, 1913.—*Mr. Béland.*
Not printed

62*k*. Return to an Order of the House of the 29th January, 1913, for a copy of all letters, petitions, telegrams, bonds, reports and other papers and documents in the possession of the Post Office Department, or any department of the government, relating to the letting of the mail contract between Guysborough and Charlos Cove, County of Guysborough, N.S., during the year 1912. Presented 28th April, 1913.—*Mr. Sinclair.*
Not printed.

62*l*. Return to an Order of the House of the 14th April, 1913, showing the names of the various railway mail clerks employed, respectively, on the Montreal and Quebec divisions and the date of the appointment and residence of each. Presented 7th May, 1913.—*Mr. Bureau* ....*Not printed.*

62*m*. Return to an Order of the House of the 9th April, 1913, for a copy of the contract entered into by the Post Office Department with the Ontario Equipment Company of Ottawa relating to the purchase of locks for mail bags. Presented 7th May, 1913.—*Mr. Carvell* ....*Not printed.*

62*n*. Return to an Order of the House of the 7th April, 1913, for a copy of all correspondence, telegrams, &c., exchanged between the Honourable the Postmaster General and Dr. Faucher, of Quebec, concerning the purchase of a certain patented lock for mail bags. Presented 7th May, 1913.—*Mr. Lapointe (Kamouraska)*.. .. .. ..*Not printed.*

62*o*. Return to an Order of the House of the 7th April, 1913, for a copy of all correspondence, telegrams, &c., exchanged between the Honourable the Postmaster General and Mr. Aimé Dion, advocate of Quebec, concerning the purchase of a certain patented lock for mail bags. Presented 7th May, 1913.—*Mr. Verville*................*Not printed.*

62*p*. Return to an Order of the House of the 29th January, 1913, for a copy of all letters, petitions, telegrams, complaints, reports, bonds of indemnity, and all other papers and documents in the possession of the Post Office Department, or any department of the government, relating to the contract for carrying the mails between Linwood or some point of the Intercolonial railway, County of Antigonish, N.S., and Grosvenor, County of Guysborough, N.S. Presented 9th May, 1913.—*Mr. Sinclair*....*Not printed.*

62*q*. Return to an Order of the House of the 24th April, 1913, for a return showing the full names of the mail carriers in the County of Vaudreuil and Soulanges; between what place they perform the service; the distance between each of these places; the amount of each carrier's contract, and the amount the government paid for the carriage of the mail in these different places before September, 1911. Presented 16th May, 1913.—*Mr. Boyer*..*Not printed.*

62*r*. Return to an Order of the House of the 7th May, 1913, for a return showing the number of post offices in Yarmouth County, Nova Scotia, not served with daily mail, giving the names and the number of times per week served. Presented 20th May, 1913. —*Mr. Law*......................... .... *Not printed.*

62*s*. Return to an Address to His Excellency the Administrator of the 7th April, 1913, for a copy of all orders in council, reports of experts and contracts, in connection with

CONTENTS OF VOLUME 27—*Continued.*

the different purchases of rural mail delivery boxes made by the Post Office Department since 1908, until 1st January, 1912. Presented 21st May, 1913.—*Mr. Lemieux.* *Not printed.*

62*t*. Return to an Order of the House of the 12th May, 1913, for a return giving the names of the post offices and of the postmasters in the Counties of Soulanges and Vaudreuil. Presented 21st May, 1913.—*Mr. Boyer*......................*Not printed.*

62*u*. Return to an Order of the House of the 5th December, 1912, for a copy of all letters, telegrams, petitions and other documents relating to the establishment of rural mail delivery routes in the County of Pictou since the 1st October, 1911, with a statement of all routes applied for, of routes established and of those refused, and the reason for their refusal. Presented 2nd June, 1913.—*Mr. Macdonald*.............*Not printed.*

62*v*. Return to an Order of the House of the 31st March, 1913, for a copy of all correspondence concerning the purchase of new locks for mail bags by the Post Office Department from the Ontario Equipment Company. Presented 4th June, 1913.—*Mr. Carvell.* *Not printed.*

62*w*. Return to an Order of the House of the 17th February, 1913, for a copy of all correspondence, letters, telegrams, memoranda, tenders, bonds and all other documents relative to the contract for the carrying of the mail between the post office and Canadian Pacific Railway station at Three Rivers and vice versa, since the eleventh day of October, 1911, to date. Presented 4th June, 1913.—*Mr. Tobin*..........*Not printed.*

62*x*. Return to an Order of the House of the 21st April, 1913, for a copy of all correspondence, telegrams, complaints, affidavits, reports, recommendations, requests, certificates, contracts and other documents relating to the cancelled contract of M. E. Bougie, for carrying the mails between the post office and railway station at Bromptonville, Quebec. Presented 4th June, 1913.—*Mr. Bureau*.............................*Not printed.*

63. Return to an Order of the House of the 4th December, 1912, for a return showing all the new post offices opened in the County of Bonaventure, since October, 1911, up to date, and a copy of the correspondence in connection therewith, together with the names of such post offices and postmasters, and the location of such offices; and also a copy of all papers asking for such offices. Presented 14th January, 1913.—*Mr. Marcil (Bonaventure)*.................. ....*Not printed.*

64. Return to an Order of the House of the 9th December, 1912, for a copy of all petitions, correspondence, memoranda, recommendations and other papers or documents in the possession of the Department of Marine and Fisheries relating to the proposals to supply medicine or medical attendance free, or otherwise, to Canadian boat fishermen. Presented 14th January, 1913.—*Mr. Sinclair*........................*Not printed*

65. Return to an Order of the House of the 4th December, 1912, for a copy of all correspondence, petitions, complaints, memoranda, reports and investigations regarding the service performed by the steamer *Canada*, owned by the Inter-Provincial Navigation Company of Fraserville, Quebec, since October, 1911, up to date, and also of all documents bearing on the present contract with the Department of Trade and Commerce, or the renewal or extension thereof. Presented 14th January, 1913.—*Mr. Marcil (Bonaventure)*.............. ....*Not printed*

66. Return to an Order of the House of the 9th December, 1912, for a copy of all papers, documents, telegrams, letters, &c., relating to the matter of the establishment of a lobster hatchery at Spry Bay, Halifax County, N.S. Presented 14th January, 1913. —*Mr. Maclean (Halifax)*......................... ....*Not printed.*

CONTENTS OF VOLUME 27—*Continued.*

67. Return to an Order of the House of the 9th December, 1912, for a copy of all papers, documents, telegrams, &c., between the Department of Trade and Commerce and any company, person or persons, relative to the continuance and payment of a subsidy towards a steamship service between St. John, N.B., and Bear River, N.S., for the fiscal year 1912, and performed during the fiscal year 1911. Presented 17th January 1913.—*Mr. Maclean (Halifax)*...*Not printed.*

67*a*. Return to an Order of the House of the 4th December, 1912, for a copy of all papers, documents, memoranda, letters, telegrams and documents bearing on a request for a subsidy for a steam service between Bonaventure, Quebec, or any other part of Bonaventure County and Bathurst, New Brunswick, or any other part of Gloucester County, New Brunswick, and between New Richmond, Quebec, and Dalhousie, New Brunswick, and between Carleton and Miguasha, Quebec, and Dalhousie, New Brunswick, or Campbellton, New Brunswick, or both, as well as a copy of all replies made for such subsidies and this since October, 1911, to date. Presented 14th January. 1913.—*Mr. Marcil (Bonaventure)*...*Not printed.*

67*b*. Return to an Address to His Royal Highness the Governor General of the 9th December, 1912, for a copy of all advertisements, tenders, contracts, orders in council memoranda, papers, letters and correspondence in any way relating to a subsidized steamship service between Canadian ports and any ports of the British West Indies, or any proposed improvement or extension of such steamship service since 1st November, 1911 to the present time. Presented 15th January, 1913............*Not printed.*

67*c*. Return to an Order of the House of the 4th December, 1912, for a copy of all reports made by officials of the Department of Railways and Canals on the Quebec and Oriental railway, and the Atlantic, Quebec and Western railways, together with a statement of the subsidies paid such railways since October, 1911, up to date, and a copy of all correspondence in that connection. Presented 17th January, 1913.—*Mr Marcil (Bonaventure)*...*Not printed*

67*d*. Return to an Order of the House of the 4th December, 1912, for a copy of all correspondence between the Minister of Railways or any other member of the government and any person regarding the acquisition by the government of Canada of the Quebec Oriental railway, formerly the Atlantic and Lake Superior railway, and the Atlantic, Quebec and Western railway, or both. Presented 27th January, 1913.—*Mr. Marcil (Bonaventure)*...*Not printed.*

67*e*. Return to an Order of the House of the 29th January, 1913, for a copy of the report made to the Minister of Railways and Canals by the party of government engineers who inspected the Quebec and Saguenay railway during December, 1912, January, 1913. Presented 27th February, 1913.—*Mr. Lemieux*........................*Not printed.*

67*f*. Return to an Order of the House of the 17th February, 1913, for a copy of all reports made by any engineers or accountants to the Minister of Railways and Canals on the usefulness of the Atlantic, Quebec and Western railway and the Quebec Oriental railway, to the Intercolonial railway as branch lines or feeders. Presented 27th February, 1913.—*Mr. Marcil (Bonaventure)*.................................*Not printed.*

67*g*. Return to an Address to His Royal Highness the Governor General of the 9th December, 1912, for a copy of all papers, documents, petitions, orders in Council, memoranda, correspondence, &c., by and between the government of Canada or any member thereof, and the government of the province of British Columbia, or any member thereof, since 1st May, 1912, relating to the subject to an increase of the provincial subsidy to the said province. Presented 16th April, 1913.—*Mr. Maclean (Halifax)*.
Printed for sessional papers.

CONTENTS OF VOLUME 27—*Continued.*

67*h*. Return to an Address to His Royal Highness the Governor General of the 20th January, 1913, for a copy of all documents and memorials of the government of British Columbia presenting claims for additional provincial subsidies, and of all correspondence and orders in council on the same. Presented 19th April, 1913.—*Sir Wilfrid Laurier*............................ ....*Printed for sessional papers.*

67*i*. Copy of agreement made with the several provinces as to the expenditure of the subsidies granted under the Agricultural Aid Act, and statement showing the purposes for which said subsidies are to be expended. Presented 6th June, 1913, by Hon. Mr Burrell.... ....*Not printed*

68. Copies of general orders promulgated to the militia for the period between 2nd November, 1911, and 5th Novmber, 1911. Presented by Hon. Mr. Hughes, 14th January, 1913. *Not printed.*

69. Return to an Address to His Excellency the Right Honourable Sir Charles Fitzpatrick, P.C., &c., administrator, of the 31st March, 1913, for a copy of all papers, documents, petitions, letters, telegrams, orders in council and other papers and documents in possession of the Department of Customs, relating to the duty payable on twine used for fishing purposes, and especially relating to the construction placed upon item 682 of the Customs Tariff. Presented 23rd May, 1913.—*Mr. Sinclair*..........*Not printed.*

70. Return to an Order of the House of the 30th November, 1912, for a return showing:—

1. The date when the present Canadian Pure Food Act, now known as the Adulteration Act, R.S.C., was enacted.

2. What foods, beverages or drugs have standards of strength and purity under the Act been fixed, and what are the dates when such standards become operative.

3. What foods, beverages or drugs have standards of strength and purity been prepared and recommended from time to time by the chief analyst, which have not been put in force, and why were such standards not put in force.

4. How many cases of adulteration together with cases which show standards of quality below those required by the Adulteration Act, have been ascertained by the Dominion analyst since the said Act came into operation.

5. In how many of such cases did prosecutions under the Act or under the Criminal Code follow, and in how many cases were convictions secured. Presented 14th January, 1913.—*Mr. McDonnell*........................ ....*Not printed.*

71. Return to an Order of the House of the 4th December, 1912, for a copy of all correspondence, negotiations, proposals in writing and other papers and documents in the possession of the government, or any department thereof, relating to reciprocity in trade with the United States, bearing date between the 1st day of January, 1890, and the 31st day of December, 1891. Presented 14th January, 1913.—*Mr. Sinclair.* *Not printed*

72. Return to an Order of the House of the 4th December, 1912, for a copy of all letters, telegrams, &c., exchanged between the member for Bellechasse County and the Minister of Agriculture and the Postmaster General, concerning the appointment of an additional physician at the quarantine station of Grosse Ile. Presented 14th January, 1913.—*Mr. Lemieux*...................... ....*Not printed.*

72*a*. Return to an Order of the House of the 10th December, 1912, for a copy of all correspondence, documents, recommendations and reports concerning the appointment of Doctor Pomminville, to the position of surgeon of the St. Vincent de Paul penitentiary, replacing Doctor A. Allaire. Presented 24th January, 1913.—*Mr. Wilson (Laval)*............. ....*Not printed.*

CONTENTS OF VOLUME 27—*Continued.*

72*b*. Return to an Order of the House of the 10th December, 1912, for a copy of all letters, telegrams, correspondence and other documents relating to the appointment of Charles W. Hatfield, fishery officer on the Tusket River, Yarmouth County, N.S. Presented 27th January, 1913.—*Mr. Law*...*Not printed.*

72*c*. Return to an Order of the House of the 10th December, 1912, for a copy of all correspondence, letters, requests, telegrams and other documents relating to the appointment of Louis Nadeau as postmaster at Ste. Christine, County of Bagot. Presented 4th February, 1913.—*Mr. Marcil*...*Not printed.*

72*d*. Return to an Order of the House of the 29th January, 1913, for a copy of all orders letters, telegrams and other documents in connection with the appointment of Lt.-Col. Warburton, as administrative medical officer at the Charlottetown camp in 1912, and of all letters and telegrams asking for a change in the said appointment, and of all orders and other documents relating to his being superseded, and to the appointment of his junior, Lt.-Col. Jenkins, in his place. Presented 13th February, 1913.—*Mr. Macdonald*.................. ....*Not printed.*

72*e*. Return to an Order of the House of the 27th January, 1913, for a copy of all documents, letters, correspondence, recommendations, reports, &c., relating to the appointment of Mr. J. Begin as manager of the experimental farm at Ste. Anne de la Pocatière. Presented 13th February, 1913.—*Mr. Lapointe* (*Kamouraska*)....*Not printed.*

72*f*. Return to an Order of the House of the 29th January, 1913, for a copy of all correspondence exchanged between Dr. Marcotte, M. Lavallée, M.P., the Honourable the Postmaster General and the Minister of Agriculture, concerning the appointment of an additional medical officer at Grosse Isle quarantine station. Presented 19th February, 1913.—*Mr. Lemieux*.. .. ..*Not printed.*

72*g*. Return to an Order of the House of the 3rd March, 1913, for a copy of all letters, telegrams, recommendations and other papers in connection with the appointment of John Macdonald as Inspector of Inland Revenue for the Maritime Provinces, and of all letters, telegrams, applications, recommendations and other papers received from any other person or persons relative to the applications of other persons for the position. Presented 17th March, 1913.—*Mr. Macdonald*.......................*Not printed.*

72*h*. Return to an Order of the House of the 17th February, 1913, for a copy of all letters, petitions, telegrams, recommendations and other papers and documents, in the possession of the Department of Marine and Fisheries, or any department of the government, relating to the appointment of F. W. Kelley, M.D., as port physician at Bridgewater, N.S. Presented 18th March, 1913.—*Mr. Law*......................*Not printed*

72*i*. Return to an Address to His Royal Highness the Governor General of the 4th December, 1912, for a return showing all appointments to office under the Dominion government in the constituency of Edmonton from 10th October, 1911, to 21st November, 1912, with a statement of the salaries in each case, together with a copy of all correspondence, recommendation to council, orders in council, and all other papers or documents in any way connected with such appointments. Presented 28th March, 1913.—*Mr. Oliver* ....*Not printed.*

72*j*. Return to an Order of the House of the 4th December, 1912, for a copy of all correspondence, recommendations, reports, memoranda and other documents bearing on the appointment of a general foreman, or other permanent or temporary officials, of the Department of Public Works in the County of Bonaventure since October, 1911, up to date, with the names, residences, duties and salaries of such appointees. Presented 2nd May, 1913.—*Mr. Marcil* (*Bonaventure*)...............................*Not printed.*

CONTENTS OF VOLUME 27—*Continued.*

72*k*. Appointment of Mr. McCloskie as postmaster at Waukau, British Columbia.—(*Senate*) *Not printed.*

73. Return to an Address to His Royal Highness the Governor General of the 9th December, 1912, for a return showing all changes made in the Customs Tariff of Canada by order in council since the close of last session of parliament. Presented 14th January, 1913...*Not printed.*

74. Return to an Order of the House of the 9th December, 1912, for a return showing the quantity and value of molasses of cane, as defined in tariff item No. 137a, imported into Canada for the fiscal year ending 31st March, 1912, from each island of the British West Indies, which are parties to the Canada-West India Trade Agreement. Presented 14th January, 1913.—*Mr. Maclean (Halifax)*........................*Not printed.*

75. Letter of the Honourable F. D. Monk, M.P., to the Right Honourable the Prime Minister, resigning his position as Minister of Public Works, and the letter of the Prime Minister in acknowledgment thereof. Presented by Hon. Mr. Borden, 14th January, 1913..*Not printed.*

75*a*. Return to an Order of the House of the 26th May, 1913, for a copy of all letters, reports, documents and all other communications relating to the appointment of Colonel Crowe as Commandant of the Royal Military College and to his resignation of said position, or to the extension of his term of service or to the termination thereof, and of all papers or letters passing between the minister and Colonel Crowe, relative to his resignation or the failure to extend his term of service. Presented 3rd June, 1913.—*Mr. Macdonald*..*Not printed*

75*b*. Return to an Order of the House of the 26th May, 1913, for a copy of all letters, reports, complaints and other communications and documents which passed between General McKenzie and the Minister of Militia or his department, previous to, and which led up to the resignation of General McKenzie; and also a copy of said resignation, and the reply of the minister thereto, and of any and all communications had with the War Office thereto, and of all other papers and documents in connection therewith. Presented 4th June, 1913.—*Mr. Macdonald*......................*Not printed.*

76. Return to an Order of the House of the 4th December, 1912, for a copy of all papers, letters, telegrams, complaints and reports, bearing on the delay in the payment of census enumerators in the County of Bonaventure, in connection with the last census. together with the names, residences, amounts, and dates of payment. Presented 15th January, 1913.—*Mr. Marcil (Bonaventure)*..............................*Not printed.*

77. Report of departmental commission on the official statistics of Canada. Presented 15th January, 1913 ....*Printed for distribution only.*

78. Return to an Order of the House of the 18th March, 1912, for a copy of all correspondence in the possession of the Postmaster General respecting the change of name of Broderick post office in the Province of Saskatchewan, to St. Aldwyn. Presented 15th January, 1913..*Not printed.*

78*a*. Return to an Order of the House of the 30th November, 1911, for a copy of all papers, telegrams, letters, &c., between the Postmaster General and any other person respecting the closing or removal of the present post office at Spry Bay, Halifax County. Presented 20th January, 1913.—*Mr. Maclean (Halifax)*........................*Not printed.*

79. Report of the commissioner Dominion Police Force, for the year 1912. Presented by Hon. Mr. Foster, 15th January, 1913..*Not printed.*

CONTENTS OF VOLUME 27—*Continued.*

80. Return to an Order of the House of the 9th December, 1912, for a copy of all correspondence, complaints, reports and all documents relating to the cancelling of lease No. 18778, consented to by the Honourable Minister of Railways and Canals, to Aurile Lebœuf, on the 12th December, 1910.—Presented 16th January, 1913.—*Mr. Papineau.* *Not printed*

81. Return to an Address to His Royal Highness the Governor General of the 4th December, 1912, for a copy of all orders in council passed since 1st October, A.D. 1911, relating to the Board of Management of the Government Railways of Canada, or of any other member thereof, or in any way affecting the same, or any official of the Intercolonial Railway, as regards the duties to be performed or the powers to be exercised by the said Board or any member thereof, or by any such official, together with a copy of all recommendations, letters, applications, instructions, or other correspondence, in any manner relating thereto or having regard to the said orders in council as to the management of the Intercolonial railway. Presented 17th January, 1913.—*Mr. Emmerson*.............. ....*Not printed*

81*a*. Return to an Address to His Royal Highness the Governor General of the 4th December, 1912, for a copy of a certain Order in Council issued during the current year by which certain official reports formerly made to Board of Management of the Intercolonial Railway have been ordered in future to be made to Mr. F. P. Brady. Presented 17th January, 1913.—*Mr. Sinclair*...................................*Not printed.*

82. Return to an Order of the House of the 5th December, 1912, for a copy of all papers, including surveys, tenders, and every other record, or document in the possession of the Department of Railways and Canals or any other department of the government relating to the building of a line of railway from Estmere, County of Victoria, Province of Nova Scotia, to the town of Baddeck in the same county. Presented 17th January, 1913.—*Mr. McKenzie*.......................... ....*Not printed.*

83. Return to an Address to His Royal Highness the Governor General of the 9th December, 1912, for a copy of all documents, papers, tenders, contracts, orders in council and correspondence in connection with the supply of castings for and the purchase of scrap iron from the eastern division of the Intercolonial Railway since 1st May, 1912. Presented 17th January, 1913.—*Mr. Maclean (Halifax)*....................*Not printed.*

83*a*. Return to an Order of the House of the 9th December, 1912, for a return showing the names of the employees on the dining cars of the Intercolonial Railway and the nature of their employment; and also of the employees on the Pullman cars of the Intercolonial Railway and the nature of their employment. Presented 17th January, 1913. —*Mr. Boulay*................. ....*Not printed.*

83*b*. Return to an Order of the House of the 9th December, 1912, for a copy of all papers documents, telegrams, letters, &c., relating to a strike of temporary employees of the Intercolonial Railway at Halifax, in August, 1912. Presented 27th January, 1913.—*Mr. Mclean (Halifax)*........................ ....*Not printed.*

83*c*. Return to an Order of the House of the 10th December, 1912, for a copy of all evidence plans, reports, correspondence, &c., respecting an inquiry held concerning an accident on the Intercolonial Railway at St. André de Kamouraska on 7th October, 1912, caused by train No. 33, the maritime express going west. Presented 27th January, 1913.—*Mr. Lapointe (Kamouraska)*................................*Not printed.*

83*d*. Return to an Order of the House, of the 29th January, 1913, for a copy of the evidence taken at the inquiry held in the month of November, 1912, by Mr. MacDonald

CONTENTS OF VOLUME 27—*Continued.*

superintendent of the Intercolonial at Lévis, in reference to Alfred Laugnay, an employee of the Intercolonial at St. Charles, County of Bellechasse. Presented 27th February, 1913.—*Mr. Lapointe (Kamouraska)*............................*Not printed.*

83*e*. Return to an Order of the House of the 19th February, 1913, for a copy of all telegrams, letters, petitions, reports of engineers, plans, surveys, and other documents in the possession of the Department of Railways and Canals, and having been received since 1st January, 1912, relating to the construction of a branch line of the Intercolonial Railway into Guysborough County. Presented 18th March, 1913.—*Mr. Sinclair*........................ ....*Not printed.*

83*f*. Return to an Order of the House of the 24th February, 1913, for a copy of all petitions, resolutions, letters, telegrams and correspondence, relating to free or reduced transportation of hay over the Intercolonial Railway for the farmers of Antigonish County, Nova Scotia, and also of the evidence taken and report made as to the shortage of hay in that and other of the eastern counties of Nova Scotia. Presented 18th March, 1913.—*Mr. Chisholm (Antigonish)*.......................... ....*Not printed.*

83*g*. Return to an Order of the House of the 29th January, 1913, for a copy of all letters telegrams, tenders, acceptances of tenders, cancellation of tenders and other papers and documents in the possession of the Department of Railways and Canals, or any department of the government, bearing date after 1st July, 1912, relating to the supply of ice for the use of the Intercolonial Railway at Mulgrave, N.S. Presented 18th March, 1913.—*Mr. Sinclair*...................... ....*Not printed.*

83*h*. Return to an Order of the House of the 12th February, 1913, for a copy of all letters correspondence, petitions and other documents, on file in the Department of Railways and Canals, or in the office of the Intercolonial Railway at Moncton, relating or in any way appertaining to the new public wharf at Sackville, N.B., and the necessity of establishing in the interest of the traffic of the Intercolonial Railway, and of the shipping and trade facilities of Sackville, and of the commerce of communities adjacent thereto, rail connections between the said wharf and the main line of the said railways at Sackville station; also of all letters and other communications received by the chairman or vice-chairman of the Government Railways Managing Board, or by any official of the said railway, relating in any manner to the said subject, received by them or any of them during the years 1911, 1912 and 1913. Presented 19th March, 1913.—*Mr. Emmerson*............... ....*Not printed*

83*i*. Return to Order of the House of the 19th March, 1913, for a return showing who the tenderers were, and the amount of each tender for the supply of castings for the Intercolonial Railway during the present year. Presented 28th March, 1913.—*Mr. Macdonald* ....*Not printed.*

83*j*. Return to an Order of the House of the 19th March, 1913, for a return showing how many kegs of nails were purchased in 1912 for the Intercolonial Railway; the prices paid therefor in each case; whether tenders were invited in the case of each purchase and, if so, who the respective tenderers were and the prices submitted; to whom were the contracts awarded in each case. Presented 28th March, 1913.—*Mr. Murphy.*
Not printed.

83*k*. Return to an Order of the House of the 19th March, 1913, for a return showing the amounts received by the Intercolonial Railway for freight and passengers respectively for each of the twelve months of the calendar years 1910, 1911 and 1912, at the following stations:—Montreal, Halifax, St. John, Sydney, Truro, Moncton, New Glasgow

CONTENTS OF VOLUME 27—*Continued.*

and Amherst; also, the total receipts of the said railway for freight and passengers respectively during each of the said years. Presented 28th March, 1913.—*Mr. Rhodes.* *Not printed.*

83*l*. Return to an Order of the House of the 20th January, 1913, for a copy of all letters correspondence, telegrams, representations, requests and reports on file in the Department of Railways and Canals, or in the offices of the Intercolonial Railway at Moncton, or among the records of the Government Railways Managing Board, or in the office of the assistant chairman of the Government Railways Managing Board, relating to or in any way connected with the water supply system at Dorchester station on the Intercolonial railway, or relating to the absence of and the total failure to provide a supply of water for drinking or other purposes at that station, or in connection with the dwelling of the station agent in the Station House; and also of all correspondence, letters, requests, recommendations and reports relating to the alleged necessity of additional clerical or other help or assistance at the station. Presented 21st April, 1913.—*Mr. Emmerson*.................. ....*Not printed.*

83*m*. Return to an Order of the House of the 12th February, 1913, for a copy of all correspondence, letters, telegrams, reports and other papers on file in the Department of Railways and Canals, or in the offices of the Intercolonial Railway at Moncton, relating to M. L. Tracy, an employee of the mechanical department of the Intercolonial during the years 1899 and 1900, and of all letters and correspondence relating to the case of the said M. L. Tracy, passing between the then Minister of Railways and Canals and any of the officials of the railway, during those years; also a copy of the letters of D. Pottinger, then general manager, the late James E. Price, then general superintendent, and the late M. Jarvis, then a divisional superintendent of said railway, relating to the same subject during the said period of 1899 and 1900. Presented 21st April, 1913.—*Mr. Emmerson*..*Not printed.*

83*n*. Return to an Order of the House of the 3rd March, 1913, for a statement of all amounts collected by the Intercolonial Railway for freight on hay carried from Amherst and other stations on the Intercolonial, County of Cumberland, to Antigonish, N.S., and consigned to C. Edgar Whidden or C. B. Whidden & Son, in the month of January last and February instant, and by whom such freight was paid; also a copy of all way bills and bills of lading for the same. Presented 21st April, 1913. —*Mr. Chisholm (Antigonish)*..*Not printed.*

83*o*. Return to an Order of the House of the 3rd February, 1913, for a copy of all letters petitions, telegrams, complaints, communications, reports and other papers and documents, received since the 1st day of October, 1911, by and now in the possession of the Department of Railways and Canals, the Government Railway Managing Board or any official of the Intercolonial Railway or of the Prince Edward Island railway, relating to or in any manner appertaining to an application for, or a proposed reduction of the working hours for the Intercolonial railway employees at Moncton, or at any other point of the Intercolonial railway or the Prince Edward Island railway. Presented 21st April, 1913.—*Mr. Emmerson*...*Not printed.*

83*p*. Return to an Order of the House of the 24th February, 1913, for a copy of all complaints, requirements, requisitions, petitions, and correspondence of all kinds made by the Sydney, N.S., Board of Trade, or by the citizens of the city of Sydney, or any of them, having reference to better and increased facilities on the Intercolonial Railway on the Sydney division. Presented 21st April, 1913.—*Mr. Carroll.* *Not printed.*

CONTENTS OF VOLUME 27—*Continued.*

83*q*. Return to an Order of the House of the 31st March, 1913, for a copy of all letters, papers and other documents relating to the claim for damages for the death of the young son of Thomas Hoare, who was killed at a crossing of the Intercolonial Railway in the town of Stellarton in the summer of 1912, and of all petitions, letters, and other papers asking for the placing of gates or other protection at said crossing. Presented 1st April, 1913.—*Mr. Macdonald*..............................*Not printed.*

83*r*. Return to an Order of the House of the 14th April, 1913, for a copy of all correspondence exchanged between the Department of Railways and Canals at Moncton and the same department at Campbellton, on the subject of the collision which occurred at St. Moise, during the month of February, 1913, between the trains of E. Smith and the regular train No. 99, omitting from it the inquiry held in the matter. Presented 29th April, 1913.—*Mr. Boulay*..*Not printed.*

83*s*. Return to an Order of the House of the 7th April, 1913, for a return showing the names, residences and occupations of all the employees of the Intercolonial Railway who have been dismissed in the County of Rimouski since the 21st September, 1911. Presented 29th April, 1913.—*Mr. Lapointe (Kamouraska)*.................*Not printed.*

83*t*. Certified copy of a report of the Privy Council of the 5th May, 1913, covering the appointment of Frederick Passmore Gutelius, as general manager of Government Railways. Presented by Hon. Mr. Cochrane, 7th May, 1913... .. .. ..*Not printed.*

83*u*. Return to an Order of the House of the 31st March, 1913, for a copy of all letters, memorials, petitions, correspondence, reports and other documents in the Department of the Postmaster General, or on file therein, relating or in any wise appertaining to the inauguration or establishing of railway mail facilities between Moncton, N.B., westward over the Intercolonial Railway towards St. John, in the morning, so as to furnish, among other things, opportunities for the transmission of newspapers and other mail matter, along said railway, to make morning connection with the railway mail facilities afforded by the railway from Salisbury, Westmorland County, N.B., running into Albert County, N.B.; and also relating to the establishment of railway mail facilities on each week day evening between Moncton eastward over the said railway by train known as number 84, running between Moncton, N.B., and Springhill Junction, Nova Scotia, thus affording the direct mail connection for newspapers and other mail matter each evening from Moncton to Shediac, Memramcook, Dorchester, Sackville, Amherst, and intermediate points east of Moncton; together with a statement showing what, if any, such railway mail facilities, either by locked bag or otherwise, were established or furnished over either of the said routes, and stating the respective dates when the same were so established or furnished generally, or in relation to any one of the newspapers published in Moncton, either in the morning or in the evening. Presented 12th May, 1913.—*Mr. Emmerson*......................*Not printed.*

83*v*. Return showing whether any contract has been made for the construction or supply of cars of any kind to the Intercolonial Railway since 1st January, 1913, and if so, to whom the contract was awarded; the number of cars, kind or class, and the price to be paid; whether any tenders were called for previous to awarding said contract, and if so, who the tenderers were, the amount of the tender in each case, and if tenders were calld for by private request or public advertisement. Presented 21st May, 1913. —*Mr. Macdonald*...................... ....*Not printed.*

83*w*. Return to an Order of the House of the 28th April, 1913, for a return showing all amounts collected by the Intercolonial Railway for freight on hay shipped from Amherst and other stations on the Intercolonial, in the County of Cumberland, to Antigonish and other stations in the County of Antigonish, during the months of

CONTENTS OF VOLUME 27—*Continued.*

January, February and March last; the name of the consigners and of the consignees, the amount of freight paid on each shipment and by whom paid; also a copy of all way-bills and bills of lading for same. Presented 6th June, 1913.—*Mr. Chisholm (Antigonish)*..*Not printed.*

84. Return to an Address to His Royal Highness the Governor General of the 9th December, 1912, for a copy of all papers, documents, memoranda, orders in council, letters and correspondence, relating in any way to the closing of the Canadian Immigration Office at Boston, U.S.A., in 1911, and its subsequent re-establishment. Presented 17th January, 1913.—*Mr. McLean (Halifax)*....................................*Not printed.*

85. Copies of despatches dated 11th December, 1912, which have been addressed to the Governors General of the Commonwealth of Australia and the Union of South Africa and the Governors of New Zealand and Newfoundland, on the subject of representation of the self-governing Dominions on the Committee of Imperial Defence. Presented by Hon. Mr. Borden, 17th January, 1913..............................*Not printed.*

86. Reports in connection with the Tides and Currents of Northumberland Strait.—(*Senate*)..*Not printed.*

87. Archives Branch, *re* transferring of from Department of Agriculture to Secretary of State.—(*Senate*)...*Not printed.*

88. Commission appointed to investigate Indian reserves of British Columbia.—(*Senate*). *Not printed.*

89. Insurance rates between Canadian Atlantic ports, and ports in the United Kingdom.—(*Senate*) ....*Printed for distribution and sessional papers.*

90. Report of departmental commission relating to official statistics of Canada.—(*Senate*). *Printed for distribution only.*

91. Copy of the Sixth Joint Report of the Commissioners for the Demarcation of the Meridian of the 141st degree of west longitude. Presented by Hon. Mr. Roche, 21st January, 1913..*Not printed.*

92. Return to an Order of the House of the 9th December, 1912, for a copy of all papers, documents, petitions, memoranda, correspondence, &c., with the Government of British Columbia or any member thereof, with the fishery officers of the Marine and Fisheries Department resident in said province, with salmon canneries in said province, and with any company, person or persons, relating to the prohibition of the export of sockeye salmon from the said province of British Columbia since 15th October, 1911. Presented 20th January, 1913.—*Mr. Maclean (Halifax)*....*Not printed.*

93. Return to an Order of the House of the 20th March, 1912, for a copy of all correspondence and memoranda on the subject of cable rates, exchanged between the Canadian Post Office Department and the British Post Office Department. Presented 20th January, 1913.—*Mr. Lemieux*..*Not printed.*

94. Return to an Address to His Royal Highness the Governor General of the 9th December, 1912, for a copy of all papers, documents, letters, &c., between the Government of Canada and the Commonwealth of Australia for the past twelve months relative to the matter of preferential tariff arrangements between the said two countries. Presented 21st January, 1913.—*Mr. Maclean (Halifax)*..*Printed for sessional papers only.*

95. Report of Mr. Olivar Asselin on an investigation of Belgian and French emigration to Canada. Presented by Hon. Mr. Roche, 21st January, 1913.
Printed for distribution and sessional papers.

CONTENTS OF VOLUME 27—*Continued.*

95*a*. Return to an Order of the House of the 4th December, 1912, for a copy of all complaints, letters, papers, reports, and of all documents bearing on the investigation held at Port Daniel West, Quebec, into the conduct of Edward Dea, as overseer or guardian of the lobster hatchery at that place. Presented 22nd January, 1913.—*Mr. Marcil* ....*Not printed.*

95*b*. Report of R. A. Pringle, Esq., K.C., in relation to the investigation of the wreck of the steamer *Mayflower*, on the 12th November, 1912. Presented by Hon. Mr. Hazen, 6th February, 1913...*Not printed.*

95*c*. Return to an Address to His Royal Highness the Governor General of the 29th January, 1913, for a copy of the report of the commission appointed to investigate complaints against the United Shoe Machinery Company, together with the order in council appointing the commission, the complaints upon which the order was issued and all action, if any, taken by the government on report of commission, by order in council or otherwise. Presented 11th February, 1913.—*Sir Wilfrid Laurier.* *Not printed*

95*d*. Return to an Order of the House of the 20th January, 1913, for a copy of all evidence, letters, telegrams and other documents in connection with the investigation into the stranding of the D. G. steamer *Earl Grey* at Toney River, County of Pictou, in the spring of 1912; of the reports of the commissioner investigating the same, and of all correspondence, telegrams and documents in connection therewith, and of any departmental action in connection therewith. Presented 18th March, 1913.—*Mr. Macdonald.* *Not printed*

95*e*. Return to an Order of the House of the 27th January, 1913, for a copy of all letters, papers, evidence and other documents in connection with the investigation into the collision between the steamship *City of Sydney* and the tug boat *Douglas H. Thomas*, in Sydney Harbour, 13th November, 1912, and of the findings and reports of the commissioner holding the investigation in regard to the same. Presented 2nd April, 1913.—*Mr. Macdonald*...*Not printed.*

96. Report of the Second International Moral Education Congress held at the Hague, 22nd to 27th of August, 1912, and as related thereto, on moral instruction in the Canadian public schools, &c., by Mr. J. A. M. Aikins, who was appointed by the government to represent Canada at that Congress. Presented by Hon. Mr. Borden, 21st January, 1913..*Printed for distribution only.*

97. Return to an Order of the House of the 4th December, 1912, for a copy of all pay-lists, letters, documents, letters and other papers in connection with the expenditures at Cariboo Island in the County of Pictou. Presented 21st January, 1913.—*Mr Macdonald* ....*Not printed.*

98. Return to an Order of the House of the 22nd January, 1913, for a copy of all correspondence, letters and telegrams between the Minister of Marine and Fisheries, or any officer of his department, and J. A. Gillies, K.C., Sydney, relating to the purchase from John B. Nicholson, of a site for a salmon hatchery at Snidlope Lake, Richmond County, N.S., and also of all accounts, charges and vouchers received from the said J. A. Gillies, for services in connection therewith and the payments made to the said J. A. Gillies in respect of the same. Presented 7th February, 1913.—*Mr. Kyte.* *Not printed.*

CONTENTS OF VOLUME 27—*Continued.*

99. Return to an Order of the House of the 9th December, 1912, for a copy of all papers, documents and correspondence, between the Department of Public Works and any person or persons relating to the placing of obstructions in the waters of South West Cove, Lunenburg County, N.S. Presented 24th January, 1913.—*Mr. Maclean (Halifax)*...*Not printed.*

100. Return to an Order of the House of the 4th December, 1912, for a copy of all pay-lists, letters, documents, telegrams and other papers in connection with the expenditures at Skinner's Cove in the County of Pictou. Presented 24th January, 1913.—*Mr. Macdonald* ....*Not printed.*

101. Return to an Address to His Royal Highness the Governor General of the 22nd January, 1912, for a copy of all correspondence between the government of Canada and the government of the Province of Ontario, with regard to the extension of the boundaries of the said province. Presented 28th January, 1913.—*Sir Wilfrid Laurier.*
Not printed.

102. Return to an Order of the House of the 4th December, 1912, for a copy of all correspondence, reports, and documents, bearing on the claim of C. R. Scoles, of New Carlisle, Quebec, to a balance of subsidy voted to the Atlantic and Lake Superior railway, since October, 1911, to date. Presented 24th January, 1913.—*Mr. Marcil.*
Not printed.

103. Return to an Order of the House of the 4th December, 1912, for a copy of all correspondence, letters, telegrams, reports and other documents concerning an alleged defalcation in the accounts of Joseph J. Melanson, clerk in the customs office at Bathurst, County of Gloucester, which caused an inquiry to be held on the 23rd of October last by the Provincial Inspector of Customs, with the name of the accuser. Presented 24th January, 1913.—*Mr. Turgeon*..............................*Not printed.*

104. Return to an Order of the House of the 9th December, 1912, for a copy of all papers, letters and telegrams in the custody of the Department of Railways and Canals, or any other department of the government, between the 1st day of September, 1874, and the 1st day of September, 1879, relating to the acquisition or expropriation of lands at St. Peters, N.S., for canal purposes, and relating to the appointment of valuators to apprise the value of such lands; the instructions to such valuators, the report or reports of such valuators, the area of lands taken, and the price paid for same; and also the amount paid each valuator for his services. Presented 27th January, 1913.—*Mr. Kyte*..*Not printed.*

105. Return to an Order of the House of the 4th December. 1912, for a copy of all the different freight tariffs in force on the line of railway from Matapedia, Quebec, to New Carlisle, Quebec, and from New Carlisle, to Gascons, Quebec, and vice versa, and of any requests that have been received in regard to the change in the same; and also a copy of any requests, petitions, letters, or other documents complaining of the said tariffs. Presented 27th January, 1913.—*Mr. Marcil (Bonaventure).*
Not printed.

105*a*. Return to an Order of the House of the 10th December, 1912, for a copy of the different freight tariffs in force on the line of railway from Sunny Brae to Ferrona Junction, on the Intercolonial Railway, and of any requests that have been received in regard to the change in the same, and also a copy of any requests, petitions, letters or other documents complaining of said tariff. Presented 27th January, 1913. —*Mr. Sinclair*..*Not printed.*

CONTENTS OF VOLUME 27—*Continued.*

106. Return to an Order of the House of the 5th December, 1912, for a copy of the original instructions, including maps, specifications, profiles, &c., furnished the engineers on the eastern division of the Transcontinental railway between Winnipeg and Quebec by the chief engineer of the Transcontinental Commission, and approved by the Grand Trunk Pacific Railway Company. Also of all instructions, including specifications and profiles, issued by the chief engineer of the Transcontinental Commission or by the chairman, since 31st October, 1911, which in any way vary, amend, or depart from the original instructions above mentioned. Also, of all correspondence between the Minister of Railways or any official of his department and the chairman of the Transcontinental Commission, or the chief engineer, concerning the departure from the original instructions, either as to the grades, curves and bridges or other permanent structures. Also a copy of all correspondence between the Minister of Railways or any member of the government and any official of the Grand Trunk Pacific Railway Company referring to change of original instructions as regards grades, curves or permanent structures on the said line between Winnipeg and Quebec; and also of all correspondence between the chairman of the Transcontinental Commission or the chief engineer and any official of the Grand Trunk Pacific Railway Company, or any member of its engineering staff, concerning the proposed change of grades, curves, or other permanent structures on the line of the Transcontinental between Winnipeg and the City of Quebec. Presented 30th January, 1913—*Mr. Graham.* *Not printed.*

106*a*. Return to an Order of the House of the 7th May, 1913, for a copy of a letter, dated 24th September, 1904, written by Chief Engineer Lumsden of the Transcontinental Commission to Chairman Wade of the same body, in which the former recommended to the latter certain grades on the Transcontinental railway. Presented 15th May, 1913.—*Mr. Graham*.................... ....*Not printed.*

107. Return to an Order of the House of the 20th January, 1913, for a copy of all papers in connection with a claim of L. A. Sauvé to certain buildings at La Pointe des Cascades, on the Soulanges canal, and of all correspondence on the same. Presented 30th January, 1913.—*Sir Wilfrid Laurier*.......................................*Not printed.*

108. Return to an Order of the House of the 5th December, 1912, for a copy of the contract entered into between the Department of Railways and Canals and W. H. Weller for St. Peters canal improvements, and for a copy of all correspondence between the contractor or any other person, firm or corporation and the Honourable Minister of Railways and Canals relating to the dumping of material removed by the contractor. Presented 30th January, 1913.—*Mr. Kyte*..................................*Not printed.*

108*a*. Return to an Order of the House of the 27th January, 1913, for a copy of all correspondence between the Department of Railways and Canals and C. D. Sargent, C.E., and between C. D. Sargent, C.E., and H. G. Stanton, Superintending Engineer of the St. Peters Canal, or between W. H. Weller, contractor for the St. Peters canal improvements, and either or all of said parties relative to work done by the contractor outside of his contract, and the specifications thereof, and also a copy of all correspondence, letters and telegrams between the Department of Railways and Canals or C. D. Sargent, C.E., and any other person, in regard to the same; and of all accounts and vouchers rendered by the contractor to the government of such work, and the payment made by the government to the contractor, specifying whether the same is paid for in full or otherwise. Presented 21st April, 1913.—*Mr. Kyte.* *Not printed.*

108*b*. Return to an Order of the House of the 19th March, 1913, for a copy of the accounts of personal expenses paid to Mr. St. Amour, Superintendent of the Soulanges Canal,

CONTENTS OF VOLUME 27—*Continued.*

since he entered upon his duties.—Also return to an Order of the House of the 2nd April, 1913, for a copy of all accounts for personal expenses paid by the government to Mr. St. Amour, Superintendent of the Soulanges Canal, since the date of his appointment. Presented 29th April, 1913.—*Mr. Boyer*......................*Not printed.*

109. Return to an Order of the House of the 10th December, 1912, for a copy of all correspondence, letters, telegrams, petitions and other documents received since the 1st day of January, 1912, asking that the line of railway known as the Vale Road, should be taken over by the Intercolonial Railway. Presented 30th January, 1913.—*Mr. Macdonald*................ ....*Not printed.*

110. Return to an Order of the House of the 27th January, 1913, for a copy of all correspondence in connection with the issuing of letters patent to the Quebec Railway, Light, Heat and Power Company, Limited, and also said letters patent. Presented 30th January, 1913.—*Mr. Lemieux*..*Not printed.*

111. Return to an Order of the House of the 9th December, 1912, for a copy of all papers, documents, correspondence, &c., between the Department of Trade and Commerce and Mr. Donnelly, late Canadian Trade Commissioner in Mexico, relating to the closing of the office of such trade commissioner in Mexico. Presented 3rd February, 1913.—*Mr. Maclean (Halifax)*...*Not printed.*

112. Return called for by Section 88 of Chapter 62, Revised Statutes of Canada, requiring that the Minister of the Interior shall lay before parliament, each year, a return of liquor brought from any place out of Canada into the territories by special permission in writing of the Commissioner of the Northwest Territories. Presented by Hon. Mr. Roche, 3rd February, 1913...*Not printed.*

113. Return to an Order of the House of the 22nd January, 1913, for a copy of all letters, telegrams and other papers and documents, relating to the resignation of Lt.-Col. W. F. Moore, 20th Regiment, Halton Rifles, and also of the resignation and the reply thereto. Presented 6th February, 1913.—*Mr. Macdonald*................*Not printed.*

114. Return to an Order of the House of the 20th January, 1913, for a copy of all letters, papers, telegrams and other documents in connection with the strike of firemen and other men employed on the D.G.S. *Earl Grey*, in the year 1912 and 1913. Presented 11th February, 1913.—*Mr. Macdonald*.....................................*Not printed.*

115. Return to an Order of the House of the 27th March, 1912, for a copy of all papers, letters and telegrams relating to the applications for, or the granting of, a lease of False Cove Flats, Vancouver, B.C. Presented 11th February, 1913.—*Mr. Macdonald.* *Not printed.*

116. Return to an Order of the House of the 27th January, 1913, for a copy of all correspondence and other papers in connection with a proposed guarantee of bonds to the Quebec and Saguenay railway. Presented 11th February, 1913.—*Mr. Lemieux*....*Not printed.*

116*a*. Return to an Order of the House of the 9th April, 1913, for a copy of all documents, including petitions, memorials, letters and telegrams, addressed to the government, or any of its members, urging it to take over and incorporate into the Canadian government railway system, the Quebec and Oriental Railway and the Atlantic, Quebec and Western Railway, with a copy of all the answers thereto. Presented 20th May, 1913. —*Mr. Marcil (Bonaventure)*...*Not printed.*

CONTENTS OF VOLUME 27—*Continued.*

116*b*. Return to an Address to His Royal Highness the Governor General of the 11th December, 1912, for a copy of all orders in council in connection with the construction of a line of railway from St. John to Grand Falls in the Province of New Brunswick, or any portion thereof and also of all plans and profiles filed with the Department of Railways and Canals by the St. John and Quebec Railway Company, and of all correspondence between the Department of Railways and Canals or any official thereof and with the said company or the Government of the Province of New Brunswick, or any official thereof, with reference to the curves, grades or general specifications of the said railway or any portion thereof. Presented 20th May, 1913.—*Mr. Carvell.* *Not printed.*

116*c*. Return to an Order of the House of the 28th April, 1913, for a copy of all memorials, petitions, letters, and other documents submitted to the Board of Railway Commissioners from 1st January, 1913, to date, by any party whatsoever regarding the service of the Quebec and Oriental Railway and the Atlantic, Quebec and Western Railway, as to freight, passengers and express matters, with a copy of all orders and rulings issued by such Board and of all correspondence in connection therewith. Presented 20th May, 1913.—*Mr. Marcil (Bonaventure)*.............................. *Not printed.*

117. Return to an Address to His Royal Highness the Governor General of the 5th December. 1912, for a return showing the number of appeals made to the Governor in Council during the twelve months preceding 25th November, 1912, against orders of the Board of Railway Commissioners, the particulars of each appeal, and the decision rendered by the Governor in Council in each case. Presented 11th February, 1913.—*Mr. Graham* .... *Printed for sessional papers only.*

118. Return to an Address to His Royal Highness the Governor General of the 22nd January, 1913, for a copy of all orders in council and of all correspondence relating to the extension of facilities for obtaining information useful to Canadian Trade and Commerce in connection with the British Consular Service. Presented 11th February, 1913.—*Mr. Ames*.. *Not printed.*

119. Return to an Order of the House of the 24th January, 1913, for a return showing all the employees of the different departments at Ottawa, and also in the nine provinces and territories of Canada, and other places outside of Canada, in the inside and outside service, who have left their employment since the 1st October, 1911, up to the 10th January, 1912, inclusively, with their names, Christian names, age, nationality, employment and salaries respectively; the date of their appointment; the date of their leaving; their salaries, the time of their appointment and at leaving; the reasons of their leaving; and if replaced or not; the names, Christian name, age, nationality, employment and salary of those who have replaced them; and in the case of dismissals, a list of the persons who asked for their dismissals; in the case of these replacing them, a list of the persons who recommended their successors Presented 11th February, 1913.—*Mr. Wilson (Laval)*.................................. *Not printed.*

119*a*. Supplementary return to an Order of the House of the 24th January, 1912, for a return showing all the employees of the different departments at Ottawa, and also in the nine provinces and territories of Canada, and other places outside of Canada, in the inside and outside service, who have left their employment since the 1st October, 1911, up to the 10th January, 1912, inclusively, with their names, Christian names, age, nationality, employment and salaries respectively; the date of their appointment; the date of their leaving; their salaries at the time of their appointment and at leaving; the reasons of their leaving; and if replaced or not; the names, Christian name, age, nationality, employment and salary of those who have replaced them;

CONTENTS OF VOLUME 27—*Continued.*

and in the case of dismissals, a list of the persons who asked for their dismissals; in the case of these replacing them, a list of the persons who recommended their successors. Presented 17th March, 1913.—*Mr. Wilson (Laval)*...........*Not printed.*

120. Return to an Address to His Royal Highness the Governor General of the 5th February, 1912, for a copy of all tenders, contracts, reports and other memoranda of the engineers of the Department of Public Works, orders in council, correspondence and all other documents relating to the construction of a dam for storage purposes at the foot of Lake Timiskaming. Presented 12th February, 1913.—*Mr. Pugsley.* *Not printed.*

120*a*. Return to an Order of the House of the 4th March, 1912, for a copy of all contracts, correspondence or writings whatsoever, respecting the construction of a dam in 1908 or 1909, called the Lake Timiskaming dam constructed or built over the rivers forming the inflow or the discharge of the said lake, exchanged between the Government of Canada and the contractor or contractors. Presented 12th February, 1913.—*Mr. Boulay*.................. ....*Not printed.*

121. Return to an Order of the House of the 28th March, 1912, for a return giving a list of the subjects of the oil paintings and water colours which have become the property of the National Gallery of Canada since 1891; and the names of the artists in each case. Presented 12th February, 1913.—*Mr. Burnham*......................*Not printed.*

122. Return to an Order of the House of the 27th January, 1913, for a copy of all documents, letters, correspondence, reports, recommendations, &c., relating to the petition of Mr. Firmin Thibault, of St. Denis, County of Kamouraska, for his indemnity for having served at the time of the Fenian invasion. Presented 13th February, 1913 —*Mr. Lapointe (Kamouraska)*...................... ....*Not printed.*

123. Return to an Order of the House of the 27th January, 1913, for a return showing what date or dates the government purchased the site for the new Dominion Rifle Range in the County of Carleton, Ontario, from whom were the several parcels of land purchased, and what price per acre was paid for each, the number of acres of land purchased, and the total amount paid therefor, if any buildings have been erected on the said lands by the government, and the cost thereof, the amounts paid by the government for commissions, fees, agency charges, and legal expenses, and to whom in connection with said purchase, the amount of money expended by the Government on the said range for all purposes, from the date of the original purchase of the land up to 23rd January, 1913, and any sums remaining to be paid in any way connected with the purchase of the said range, to whom and the respective amounts thereof, the distance from the post office in the City of Ottawa to the said range, if any line of electric or other railway runs from the City of Ottawa to the said range, and what means of transportation will be provided for riflemen going to and returning from the said range. Presented 13th February, 1913—*Mr. Wilson (Laval)*.............*Not printed.*

124. Return to an Address to His Royal Highness the Governor General of the 10th February, 1913, for a copy of the memorial presented to the Government during the session of 1911-12, by a delegation from the Government of Prince Edward Island asking for an increased provincial subsidy, a copy of which memorial was laid on the Table of the House by the Finance Minister last session of Parliament, but is not now apparently on the files of the House Presented 17th February, 1913.—*Mr. Hughes (Kings, P.E.I.)*..................................*Printed for sessional papers only.*

125. Return to an Address to His Royal Highness the Governor General of the 9th December, 1912, for a copy of all papers, letters, telegrams and correspondence between the Government of Canada or any member thereof, since 1st November, 1911, to the pre-

CONTENTS OF VOLUME 27—*Continued.*

sent time, with any corporation, company, party or parties, in any way relating to the Customs Tariff upon cement or to the temporary reduction made of the Customs Tariff upon cement; also for a copy of all letters and correspondence by and between members of the Government of Canada during the same period relating to the same subject, and of all papers, documents, memoranda and orders in council relative to the reduction of the Customs Tariff upon cement made by order in council since the close of the last session of parliament. Presented 17th February, 1913.—*Mr. Maclean (Halifax)*.............................. ....*Not printed.*

125a. Return to an Address to His Royal Highness the Governor General of the 20th January, 1913, for a copy of all petitions since the 1st of October, 1911, addressed to the Governor General in Council or to any member of the government, asking for a remission and the adjustment of duty on cement, of all letters to the ministers individually on the same, of all correspondence and of all orders in council. Presented 21st February, 19.3.—*Sir Wilfrid Laurier*..................................*Not printed.*

125b. Return to an Address to His Royal Highness the Governor General of the 9th December, 1912, for a copy of all papers, documents, petitions, orders in council, letters and telegrams in any department of the government of Canada, or that passed between the Department of Customs and the Department of Justice or any solicitor, counsel, association, company or individual, during the past twelve months, respecting the imposition of tariff duties upon imported lumber dressed on one side and sized, or respecting the interpretation of tariff item No. 504, together with a printed copy of any stated case, appeal, factum or argument used before the Exchequer Court of Canada or the Supreme Court of Canada, in the matter of the judicial interpretation of tariff item No. 504. Presented 4th June, 1913.—*Mr. Maclean (Halifax)* *Not printed.*

126. Return to an Order of the House of the 4th December, 1912, for a copy of all correspondence passing between the government or any member thereof with respect to the east half of Section 27 in township six (6) in range two (2) west of the third meridian. Presented 17th February, 1913.—*Mr. Martin (Regina)*......................*Not printed.*

127. Return to an Order of the House of the 27th January, 1913, for a return showing when the militia or regular forces was first called out in Canada since Confederation in aid of the civil authorities, how often, when and where has the same been called out since, the amount of money paid by each municipal corporation for such service in each case, what corps called out on each occasion, whether to quell strikes in each instance or for what purpose. Presented 18th February, 1913.—*Mr. Macdonald.* *Not printed.*

128. Return to an Order of the House of the 29th January, 1913, for a copy of all correspondence, papers, &c., concerning the application by James McKelvey, of the town of Sarnia, Ontario, for Fenian Raid Volunteer Bounty. Presented 18th February, 1913.—*Mr. Macdonald*...................... ....*Not printed.*

129. Return to an Order of the House of the 10th February, 1913, for a copy of all documents, correspondence, memorandums, reports, requests for inquiries, of the appointment of commissioners and other documents, relating to the study of the causes for the depopulation of country places and the high cost of living in the eastern provinces of the Dominion. Presented 18th February, 1913.—*Mr. Pâquet*..........*Not printed.*

130. Return to an Order of the House of the 9th December, 1912, for a copy of all papers, documents, memoranda and correspondence relating to the application of the Banque Internationale to the Treasury Board for a certificate for the commencement of business. Presented 18th February, 1913.—*Mr. Maclean (Halifax)*..........*Not printed.*

CONTENTS OF VOLUME 27—*Continued.*

131. Return to an Order of the House of the 4th December, 1912, for a copy of all papers, documents, telegrams, reports, letters, and instructions regarding smelt and salmon fishing in the Restigouche river and the Baie des Chaleurs since October, 1911, up to date, together with copy of instructions issued to officials of the Department of Marine and Fisheries in that connection. Presented 18th February, 1913.—*Mr. Mareil (Bonaventure)*.................... ....*Not printed.*

132. Return to an Order of the House of the 29th January, 1913, for a copy of all correspondence and papers concerning the increase of salary of Mr. Sevigny, employed at the immigration office at Montreal. Presented 18th February, 1913.—*Mr. Carvell.* *Not printed.*

133. Return to an Order of the House of the 5th February, 1913, for a return showing whether any order for goods has been given by the Department of Public Works since 1st October, 1911, at Montreal, Quebec, St. John and Halifax; tenders asked for in each case; orders for goods given without tenders; names of firms, and amounts in each case. Presented 19th February, 1913.—*Mr. Macdonald*................*Not printed.*

134. Return to an Order of the House of the 10th December, 1912, for a copy of all correspondence and other papers, in the Department of Public Works, concerning the awarding of a contract for a Welsh coal supply to the various Dominion public buildings in Montreal. Presented 19th February, 1913.—*Mr. Lemieux....Not printed.*

135. Return to an Order of the House of the 5th December, 1912, for a return showing how many dredging contracts were let by the Department of Public Works during the year 1911-12, the name of each tenderer and the amount of each tender. Presented 19th February, 1913.—*Mr. Lemieux*..*Not printed.*

135*a*. Return to an Order of the House of the 4th December, 1912, for a return showing the quantity by cubic yards of dredging made in the harbour of Bathurst by the dredge *Restigouche* during the months of May, June, July, August, September, October, and November of the year 1911, and during the same months in the year 1912. Presented 19th February, 1913.—*Mr. Turgeon*..*Not printed.*

135*b*. Return to an Order of the House of the 10th December, 1912, for a copy of all correspondence, documents, recommendations and reports respecting the dredging Des Prairies river, the work done, depth, length and width of channel dredged, the list of men employed to perform that work, their salaries, and the amount of money spent on that work since the 1st of October, 1911, up to the 21st November, 1912. Presented 12th May, 1913.—*Mr. Wilson (Laval)*......................................*Not printed.*

135*c*. Return to an Order of the House of the 3rd March, 1913, for a copy of all documents, letters, reports of engineers and a detailed statement of expenditure in connection with dredging at Ste. Anne de Restigouche and Cross Point, Bonaventure County. Presented 4th June, 1913.—*Mr. Mareil (Bonaventure)*.....................*Not printed.*

135*d*. Return to an Order of the House of the 19th March, 1913, for a return showing the amount of dredging done by the government dredges for private parties or firms in Prince Edward Island, during the season of 1912; the names of the parties or firms for whom this dredging was done; the number of yards of material dredged for each party or firm; the class of material dredged, and the price per yard the government charged for this dredging; who measured the material dredged, and whether it was scow measurement that was made; who recommended the said dredging to be done; if the resident engineer or any engineer was consulted in regard to the measuring, and if the resident engineer or any engineer had control over the matter at all. Presented 6th June, 1913.—*Mr. Hughes (Kings, P.E.I.)*.......................*Not printed.*

CONTENTS OF VOLUME 27—*Continued.*

136. Return to an Order of the House of the 9th December, 1912, for a copy of the accounts of Jean Baptiste Lena and of his wife, for work done to the public buildings at Valleyfield, Quebec, in May, 1912; also for a copy of all correspondence, reports and documents relating to the payment in full or a part of their accounts. Presented 19th February, 1913.—*Mr. Papineau*............*Not printed.*

137. Return to an Order of the House of the 4th December, 1912, for a return showing the amount of money expended in improving the channel of the Ottawa river between the city of Hull and the village of Masson. Presented 19th February, 1913.—*Mr. Devlin.* *Not printed.*

138. Return to an Order of the House of the 4th December, 1912, for a copy of all documents relating to the transferring of P. E. Amiot, resident engineer of the Department of Public Works, Bonaventure, Quebec, to the district of Chicoutimi and Saguenay, and the appointment in his stead, in Bonaventure County, of Charles E. Tache, of Chicoutimi, as resident engineer, with a copy of all the instructions given to the latter and his duties, residence and salary. Presented 19th February, 1913.—*Mr. Marcil (Bonaventure)*............*Not printed.*

139. Return to an Order of the House of the 4th December, 1912, for a copy of all petitions, correspondence, memoranda, reports, and resolutions of county or other municipal councils of Bonaventure County asking or objecting to certain public works in Bonaventure County since October, 1911, with the Minister of Public Works, or any member of the present administration, and replies made thereto. Presented 19th February, 1913.—*Mr. Marcil (Bonaventure)*............*Not printed.*

140. British Canadian Loan and Investment Company, Limited, Toronto, for year 1911.—*(Senate)*............*Not printed.*

141. Claims of present fish warden, Baker Lake, County of Madawaska, N.B.—*(Senate).* *Not printed.*

141*a*. Return to an Order of the House of the 29th January, 1913, for a copy of all letters, telegrams, reports, information, convictions and other documents in the possession of the Department of Marine and Fisheries or any officer thereof relating to the prosecution in the year 1910, against George Rowlings and James Rowlings, of Musquodoboit Harbour, County of Halifax, for a violation of the fishery regulations. Presented 21st May, 1913.—*Mr. Sinclair*............*Not printed.*

141*b*. Return to an Order of the House of the 29th January, 1913, for a copy of all papers, letters, telegrams and documents or other communications, had with the Department of Marine and Fisheries or any official thereof, in regard to the prosecutions against the following parties:—Samuel Stewart, Melvin Hart, Andrew McNeil, Thomas McNeil, Hugh Malcolm, Tom Moffatt, James Waddin, Samuel Wright and Dougald Higgins, of Westville, County of Pictou, for infractions of the Fisheries Act, and of any applications or letters relative to relief from the fines imposed or the return of the same; and also of all papers, letters, and other documents relating to a charge against Rod. Martin, of Westville aforesaid, a fishery guardian, for illegal fishing and other offences. Presented 21st May, 1913.—*Mr. Macdonald*............*Not printed.*

141*a*. Claims of Messrs. Boulanger and Son, Montmagny, Quebec.—*(Senate)*....*Not printed.*

142. Copy of Report of Minister of Justice in *re* Florence Mining Company.—*(Senate).* *Not printed.*

CONTENTS OF VOLUME 27—*Continued.*

143. Instruction sent to the different Lieutenant Governors of different provinces of Canada, with commissions.—(*Senate*)................ ....*Not printed.*

144. Return to an Order of the House of the 15th January, 1913, for a copy of all papers, letters, documents, telegrams, reports and opinions in relation to the claim of William Iceton, of Purcell's Cove for a return of a boat from the Department of Marine and Fisheries or any other department. Presented 20th February, 1913.—*Mr. Macdonald* ....*Not printed.*

145. Return to an Address to His Royal Highness the Governor General of the 9th December 1912, for a copy of all papers, telegrams, letters and orders in council respecting the transfer of the property known as the Police Point Reserve to the corporation of the City of Medicine Hat, Alberta. Presented 20th February, 1913.—*Mr. Buchanan.* *Not printed.*

146. Return to an Order of the House of the 29th January, 1913, for a copy of the inquiry made by F. B. Atkinson, Lévis, as to an accident that happened to the horse of Arsene Lauzier, at Amqui, County of Rimouski, on the 19th February, 1912. Presented 20th February, 1913.—*Mr. Boulay*...................................*Not printed.*

147. Correspondence, memoranda, &c., in respect to the issue of a patent for the N. ½ of S. W. ¼ of section 8, in township 49, range 26, west of the 2nd meridian, to one Arthur Donaldson, bearing date the 19th November, 1912. Presented by Hon. Mr. Roche, 20th February, 1913.................. ....*Not printed.*

147*a*. Return to an Order of the House of the 12th February, 1913, for a copy of all letters, telegrams and other documents with respect to the north half of the southwest quarter of section eight (8), township forty-nine (49), range twenty-six (26), west of the second meridian, province of Saskatchewan, and the granting of a homestead entry for the said land to one Arthur Donaldson. Presented 6th June, 1913.—*Mr. Martin* (*Regina*)... ....*Not printed.*

148. Return to an Order of the House of the 12th February, 1913, for a copy of all papers, reports and other documents relating to the delay of the Indian Department in issuing patents for lands purchased from the St. Peters band of Indians, and forming part of the St. Peters Indian reserve, Manitoba. Presented 25th February, 1913. —*Mr. Oliver*......................... ....*Not printed.*

149. Return an Address to His Royal Highness the Governor General of the 27th January, 1913, for a copy of all applications addressed to the Government by the Algoma Steel Company for remission of duties on rails imported by the said company at Fort William; of all correspondence on the same, of all evidence sought and obtained by the government and supplied by the company in support of its application; and of all orders in council ordering such remission of duties. Presented 25th February, 1913.—*Sir Wilfrid Laurier*........................... ....*Not printed.*

150. Return to an Order of the House of the 24th February, 1913, for a return showing the stenographers and secretaries of the House of Commons, and the names of the members for whom each of them work. Presented 26th February, 1913.—*Mr. Boulay.* *Not printed.*

150*a*. Return to an Order of the House of the 31st March, ultimo, for a return giving the names and home addresses of the persons employed in the House of Commons as stenographers to members. Presented 1st April, 1913.—*Mr. Martin* (*Regina*). *Not printed.*

CONTENTS OF VOLUME 27—*Continued.*

151. Return to an Order of the House of the 16th January, 1913, for a return showing the number of bushels of grain and barrels or sacks of flour which were shipped from Montreal, Quebec, St. John, N.B., and Halifax, for twelve months preceding the 31st day of December, 1912; the kinds of each product respectively, and the quantities of said commodities at each of above points which were domestic and foreign. Presented 26th February, 1913.—*Mr. Bennett (Simcoe)*........................*Not printed.*

152. Return to an Order of the House of the 19th February, 1913, for a return showing in detail the quantity and values, respectively, of the imports and exports of Canada with Great Britain, United States, Australia and New Zealand, during the year ending 31st March, 1912, in horses, cattle, sheep, hogs, bacon, hams, fresh and salted beef, lard, tallow, mutton, canned meats, butter, cheese, eggs, poultry and apples. Presented 26th February, 1913.—*Mr. Sutherland*..............................*Not printed.*

153. Return to an Address to His Royal Highness the Governor General of the 26th February, 1912, for a copy of all letters, documents and correspondence relating to action by the Government in regrd to the relief of the shareholders and depositors of the Farmer's Bank, and of the order in council appointing Sir William Meredith as Commisioner, and all correspondence in relation thereto. Presented 26th February, 1913. —*Mr. Macdonald*........................ ....*Not printed.*

153*a*. Report of the Honourable Sir William Ralph Meredith, Kt., Commissioner appointed to make investigation into all matters connected with the Farmers Bank of Canada. Presented by Hon. Mr. White, 26th February, 1913.
Printed for distribution and sessional papers.

CONTENTS OF VOLUME 28.

(This volume is bound in three parts.)

153*b*. Report of Royal Commission authorized by orders in council dated 19th day of July, 1912, and the 5th day of August, 1912, to inquire into alleged complaints as to methods of weighing butter and cheese in Montreal, and also as to the methods of payment. Presented by Hon. Mr. Burrell, 30th May, 1913.
Printed for distribution and sessional papers.

154. Return to an Order of the House of the 27th January, 1912, for a return showing the amount of the subsidy paid to each of the four original provinces of the Dominion at Confederation, and the population on which such payment was based; the subsidy payable to each of the remaining five provinces on entering the union, and the population on which such payment was based; the sum added to the subsidy of any province as better terms, and the date which such addition was made respectively; the details of each readjustment of subsidies since 1867, and the yearly subsidy at present payable to each province, with the population on which such payment is based, and the original debt allowance, if any, respectively, placed to the credit of each province on entering the union. Presented 27th February, 1913.—*Mr. Sinclair.*
Printed for sessional papers only.

155. Return to an Order of the House of the 29th January, 1913, for a copy of all correspondence in regard to the disposition of the Marine Hospital at Pictou to the town of Pictou, or any other corporation or person. Presented 27th February, 1913.—*Mr. Macdonald*................. ....*Not printed.*

156. Return to an Order of the House of the 29th January, 1913, for a copy of all letters, tenders, contracts, papers and other documents in the possession of the Department of Marine and Fisheries relating to the making and cancellation of a contract or agreement between the said department and one Charles G. Giffin, of Isaac Harbour,

CONTENTS OF VOLUME 28.—*Continued.*

N.S., to perform certain services for the lobster hatchery at that place, and also relating to a subsequent agreement with one Philip McArthur to perform similar duties. Presented 27th February, 1913.—*Mr. Sinclair*............................*Not printed.*

157. Return to an Order of the House of the 29th January, 1913, for a copy of all papers and correspondence concerning the claim of Charles Mennier, ex-Collector of Customs at Marieville, Quebec, for rent. Presented 28th February, 1913.—*Mr. Lemieux.* *Not printed.*

158. Return to an Order of the House of the 9th December, 1912, for a copy of all letters, correspondence, documents and reports relating to the closing of the post office at Pomket river, Antigonish County, Nova Scotia, and the cancellation of the contract for the carrying of the mail between Heatherton and Pomket river. Presented 28th February, 1913.—*Mr. Chisholm (Antigonish)*............................*Not printed.*

158a. Return to an Order of the House of the 27th January, 1913, for a copy of all letters, telegrams, petitions and other correspondence and documents received by the Post Office Department during the last twelve months from the honourable member for East Grey and others, relating to the closing of the post office at Harkaway, County of Grey, province of Ontario, and of the proposed change in the mail service. Presented 25th March, 1913.—*Mr. Lanctot*............................*Not printed.*

159. Claims put forth by and on behalf of Indians of British Columbia—Report of James T. McKenna on.—*(Senate)*............................*Not printed.*

159a. Return to an Address to His Royal Highness the Governor General of the 20th January, 1913, for a copy of all correspondence between the Government of British Columbia and the Government of Canada concerning the rights and claims of the Indians in the province, and of all orders in council with regard to the same. Presented 14th May, 1913.—*Sir Wilfrid Laurier*............................*Not printed.*

159b. Return to an Order of the House of the 28th April, 1913, for a copy of all correspondence, reports and recommendations from Rev. R. L. Macdonald, Indian agent at Salmon River reserve, Richmond County, N.S., relating to the Indian school in said reserve; and of all correspondence and instructions from the Department of Indian Affairs to the said Indian agent, relating to the same; also a copy of all complaints, charges and reports against Miss Charlotte M. Devereaux, teacher of the said school, and of all correspondence and recommendations relating to the appointment of Earnest McNeil to succeed her, since 1st January, 1912. Presented 23rd May, 1913.—*Mr. Kyte*............................*Not printed.*

159c. Return to an Order of the House of the 12th May, 1913, for a copy of the last surrender and of all papers, correspondence and other documents in connection with the surrender of part of the White Bear Indian Reserve; together with a copy of all letters and telegrams referring to this surrender by officials of the Department or others, and of the authority on which this surrender was taken, the number of acres surrendered, and how disposed of. Presented 23rd May, 1913.—*Mr. Bradbury.* *Not printed.*

159d. Return to an Order of the House of the 30th April, 1913, for a copy of all letters, papers, memoranda and other documents, dated since 1st January, 1912, relating to the Kitsilano Indian Reserve in the City of Vancouver. Presented 23rd May, 1913.—*Mr. Oliver*............................*Not printed.*

160. Immigrants—number of, who settled in Canada, in 1911-12, and from whence.—*(Senate).* *Not printed.*

CONTENTS OF VOLUME 28.—*Continued.*

160*a*. Return to an Order of the House of the 7th May, 1913, for a return showing the number of immigrants coming into Canada during the year ending 31st March, 1913, inspected by the government medical inspectors; the total cost of such medical inspections; the number of medical doctors employed by the government during that period; the name, salary and location of each, including those resident in Ottawa. Presented 6th June, 1913.—*Mr. Schaffner*..................................*Not printed.*

161. Correspondence with Mr. V. Steffansson concerning northern expedition. Presented by Hon. Mr. Hazen, 3rd March, 1913..................................*Not printed.*

161*a*. Copy of order in council No. P.C. 406 of the 22nd February, 1913, with reference to Mr. V. Steffansson's proposed northern expedition. Presented by Hon. Mr. Hazen, 10th March, 1913..................................*Not printed.*

162. Return to an Address to His Royal Highness the Governor General of the 25th March, 1912, for a copy of all letters, requests, petitions, orders in council and other documents in the possession of the Department of Marine and Fisheries relating to the change in the fishery regulations by which steam trawlers were prohibited from participating in the fishing bounty. Presented 3rd March, 1913.—*Mr. Sinclair.* *Not printed.*

162*a*. Return to an Address to His Royal Highness the Governor General, of the 10th February, 1913, for a copy of all petitions, correspondence, reports of experts or officers, of orders in council, minutes of council, and of other papers and documents in the possession of the Department of Marine and Fisheries, or any department of the government, relating to steam trawling on the Atlantic seaboard. Presented 15th April, 1913.—*Mr. Sinclair*..................................*Not printed.*

163. Return to an Order of the House of the 19th February, 19'3, for a copy of all correspondence, papers, accounts, vouchers, concerning the purchase and subsequent repairs of a private car by the Department of Militia and Defence, from the Canadian Northern Railway Company. Presented 3rd March, 1913.—*Mr. Lemieux.* *Not printed.*

164. Return to an Order of the House of the 24th February, 1913, for a return showing separately the amount paid by the Department of Indian Affairs for medical attendance on account of the Indians on the Micmac reserve of Ste. Anne de Restigouche, Quebec, for each year from 1900 to 1913, inclusive, and to whom paid. Presented 10th March, 1913.—*Mr. Marcil (Bonaventure)*..................................*Not printed.*

165. Return to an Order of the House of the 19th February, 1913, for a copy of all correspondence, letters, telegrams and other documents relative to the sale of alleged Indian lands at Nyanza, riding of North Cape Breton and Victoria, N.S., to one Philip McDonald, such sale having taken place about the year 1877. Presented 17th March, 1913.—*Mr. McKenzie*..................................*Not printed.*

165*a*. Return to an Order of the House of the 7th May, 1913, for a return showing the number of acres surrendered by the Coté's Band of Indians, the number of acres sold by private sale, the number of acres still unsold; together with a copy of all letters from persons who made application for purchase of surrendered lands in Coté's reserve, or from any person on behalf of purchasers and replies thereto; and of all reports, letters or memoranda addressed to the Superintendent General of Indian Affairs, from any officer of the department respecting the private sale of said lands; also a copy of any document or documents covering the authority under which these lands were sold by private sale, and of all letters addressed to the department, or any officer of department, respecting the sale of said lands. Presented 3rd June, 1913.—*Mr. Bradbury*..................................*Not printed.*

CONTENTS OF VOLUME 28.—*Continued.*

166. Return to an Order of the House of the 12th February, 1913, for a copy of all letters, reports and other documents received by the Minister of Labour regarding labour conditions on the Grand Trunk Pacific between Tête Jaune Cache and Fort George. Presented 17th March, 1913.—*Mr. Oliver*................................*Not printed*

167. Return to an Address to His Royal Highness the Governor General of the 3rd February, 1913, for a copy of all telegrams, letters and other documents passing between the Government of Canada, or any member thereof, and the Government of the Province of Saskatchewan, or any member thereof, with respect to chapter 17 of the statutes of Saskatchewan, 1912, being an Act to prevent the employment of female labour in certain capacities. Presented 17th March, 1913.—*Mr. Martin (Regina)*......*Not printed.*

168. Return to an Order of the House of the 10th December, 1912, for a copy of all correspondence, petitions and other papers received by the Prime Minister, or any member of the government, since the 1st April, 1912, in connection with the school system established in that portion of the Keewatin Territory annexed to the province of Manitoba. Presented 17th March, 1913 —*Mr. Macdonald*.................*Not printed.*

169. Return to an Order of the House of the 29th January, 1913, for a return showing the number of accidents to lock gates or bridges on the Welland Canal during the year ending 25th November, 1912, the nature of the accidents, the amount of damage in each case and the amount recovered by the Government from vessel owners in each instance. Presented 18th March, 1913.—*Mr. Graham*........................*Not printed.*

170 Return to an Order of the House of the 3rd March, 1913, for a copy of the contract passed on the 6th day of August, 1910, between the City of Quebec and the Transcontinental Railway Commissioners, for the acquisition by the latter of the property known as Champlain Market, to be used as a station and terminals for the said railway; of all the correspondence between the said city and the present Commissioner of the said railway, with the Minister of Railways, or any other Minister, with regard to the non-execution of the said contract by the said commission. Presented 18th March, 1913.—*Sir Wilfrid Laurier*....................*Printed for sessional papers only.*

171. Return to an Order of the House of the 29th of January, 1913, for a copy of all letters, correspondence, &c., respecting the request for suspension by H. Boulay, of J. Stahl, assistant inspector of immigration on the railway. Presented 19th March, 1913.—*Mr. Boulay* ....*Not printed.*

172. Return to an Order of the House of the 17th February, 1913, for a return showing the total area of land thrown open for pre-emption and purchased homesteads in each of the provinces of Saskatchewan and Alberta since the passing of the Dominion Lands Act of 1908; also the number of acres of such lands which have been disposed of by way of pre-emptions and purchased homesteads in each of the said provinces, the amount of principal money collected on account of such lands in each of the said provinces up to 31st December, 1912, and the amount of interest collected on account of such lands in each of the said provinces to 31st December, 1912. Presented 19th March, 1913.—*Mr. Martin (Regina)*..*Not printed*

173. Return to an Order of the House of the 10th February, 1913, for a copy of all letters, correspondence, memorials and other documents received by the Right Honourable the Prime Minister and the Honourable the Minister of Justice, since the 1st day of January, 1912, relating to the request by county court judges for an increase of salary and for an amendment to the Judges Act with respect to retiring allowances. Presented 26th March, 1913.—*Mr. Proulx*...*Not printed.*

CONTENTS OF VOLUME 28.—*Continued.*

174. Return to an Order of the House of the 13th February, 1913, for a return showing the names of the keepers in Portsmouth penitentiary, and their religious belief; the names of any of the said keepers who may have been dismissed, the date, charges and on whose recommendation were they reinstated. Presented 26th March, 1913.—*Mr. Edwards*.................. ....*Not printed.*

174a. Return to an Order of the House of the 13th February, 1913, for the name of the discipline officer in charge of each of the following departments in Portsmouth penitentiary, the date when each was first appointed on the penitentiary staff, the date to his present position, and the religious belief of each: Quarry, farm, warden's residence and grounds, blacksmith shop, bath room and laundry, stone shed, tailor and shoe shop, changing room, stone pile, sewage plant, asylum ward, cell wings, library and Roman Catholic and Protestant chapels, hospital, shop dome, carpenter, tin and paint shop, and prison of isolation. Presented 26th March, 1913.—*Mr. Edwards.*
Not printed.

175. Return to an Order of the House of the 17th February, 1913, for a copy of all statements of account for salary or remuneration to the Commissioner, and his expenses, for witness fees and all other expenses in connection with the investigations by Commissioner Duchemin, of the following persons in Antigonish County namely: Patrick M. Decoste, deckhand SS. *Scotia*, Harbour au Boucher; William R. Fougère, sectionman, Harbour au Bouche; Allen Kinney, sectionman, Linwood; Hubert Myatte, sectionman, Tracadie; John McDonell, sectionman, Afton Station; John W. Malanson, sectionman, Afton; James Armstrong, sectionman, Heatherton; Charles Landry, sectionman, Pomket; William S. Landry, section foreman, Pomket; Colin McDonald, sectionman, James River; Archibald Chisholm, station agent, Heatherton; Joseph Benoit, station agent, Pomket; Alex. R. McAdam, fishery officer, Malignant Cove; Alex. McDonald, sub-collector, Doctors Brook; Charles L. Gass, sub-collector, Bayfield; Jeffrey M. Crispo, sub-collector, Harbour au Bouche; Hugh R. McAdam, postmaster, Arisaig; Thomas J. Sears, postmaster, Lochaber, Charles L. Gass, postmaster, Bayfield; and Joseph P. Benoit, postmaster, Pomquet; also the expenses in detail, of and incidental to the investigation by said Commissioner Duchemin of the charges made against John J. McDonald, postmaster, McArra's Brook; Archibald Stewart, section foreman, Harbour au Bouche; Ronald McFarlane, section foreman, Williams Point; Henry Williams, sectionman, Marshy Hope; and John W. McInnes, bridge foreman Intercolonial Railway, Antigonish. Presented 26th March, 1913.—*Mr. Chisholm (Antigonish)*.................. ....*Not printed.*

175a. Return to an Order of the House of the 28th April, 1913, for a return showing the date of the appointment of H. P. Duchemin, Investigating Commissioner for Eastern Nova Scotia; the number of days he has been employed by the government since the appointment; the gross amount paid to Mr. Duchemin as an allowance for his services, excluding travelling expenses or other outlay; the amount which has been paid to Mr. Duchemin to date for travelling expenses, living expenses, witness fees, and other sundry expenses, respectively. Presented 21st May, 1913.—*Mr. Sinclair.*
Not printed.

176. Return to an Order of the House of the 4th December, 1912, for a copy of the report or reports made by C. E. Taché, resident engineer of Bonaventure County, Quebec, on public works existing or asked for in that constituency since October, 1911, up to date. Presented 28th March, 1913.—*Mr. Marcil (Bonaventure)*.................*Not printed.*

177. Return to an Order of the House of the 6th February, 1913, for a return showing what properties within the area north of Wellington street and west of Bank street, in the City of Ottawa, have been purchased or acquired by the Government; from whom the said purchases were made, and the price paid, or agreed to be paid, in each case; the

CONTENTS OF VOLUME 28.—*Continued.*

number of said properties not yet paid for, the names of the owners thereof, and amount, if any, in dispute in each case; the names of the persons who were employed in any capacity, or for any purpose, in connection with the purchase of the said properties, and the terms of their employment; the amount which has been paid to each, and further amounts to be paid to such persons, giving their respective names; whether the Government has employed any persons or agents to collect rent from the tenants or occupants of any of the said properties, if so, the names of such rent collectors, for what period employed, and amount by way of salary, fees, or commission, paid to each; the total amount paid by the Government up to 31st January, 1913, in connection with the purchase or acquisition of the said properties. Presented 28th March, 1913.—*Mr. Murphy* ....*Not printed.*

178. Return to an Order of the House of the 24th January, 1913, for a copy of all correspondence between the Minister of Public Works and H. Morel, M.P.P., for East Nipissing, in any way relating to the construction of a road or highway from North Bay to Sturgeon Falls, Ontario; and of all petitions, correspondence, surveys, and engineers' reports in any way connected with the building of the said road or highway. Presented 28th March, 1913.—*Mr. Murphy*..................................*Not printed.*

179. Return to an Order of the House of the 4th December, 1912, for a copy of all pay-lists, letters, documents, telegrams and other papers in connection with the expenditures made on Brulé wharf in the County of Colchester during the last two years. Presented 28th March, 1913.—*Mr. Macdonald*..............................*Not printed.*

179a. Return to an Order of the House of the 10th December, 1912, for a copy of all papers, documents, tenders and correspondence relating in any way to the construction of a wharf at Kraut Point, Lunenburg County, N.S. Presented 28th March, 1913.—*Mr. Maclean (Halifax)*...................... ....*Not printed.*

180. Return to an Order of the House of the 29th January, 1913, for a copy of all correspondence, papers, &c., concerning the application made by the Eastern Canada Power Company, with a view to raise the head of the River St. Lawrence in the vicinity of Coteau, Cedar, Split Rock and Cascade rapids to the level of the water in Lake St. François. Presented 28th March, 1913.—*Mr. Lemieux*...................*Not printed.*

181. Return to an Order of the House of the 4th December, 1912, for a copy of all correspondence, letters and telegrams addressed by the Conservative candidate in the County of Gloucester at the election of 21st September, 1911, to the Minister of Public Works from the day he took his oath of office, on 10th October, 1911, up to the 31st December, of the same year, on the subject of public works then under construction in the said county. Presented 28th March, 1913.—*Mr. Turgeon*......*Not printed.*

182. Return to an Order of the House of the 10th March, 1913, for a return showing the number of men of the R. C. regiment at Aldershot, during the summer of 1912, previous to the regular militia camp; date of going into camp; number there during said time; whether tenders for supplies for these men were called for; number of tenders received and from whom; if any contracts were awarded on said tenders and, if not, what was done with the said tenders; how and from whom were supplies for these men obtained; the prices paid during said time per pound respectively, for meat, sugar, butter, tea, coffee bacon, bread, and how much per bushel for vegetables; the cost per ration for supplies for said men of the R. C. regiment at Aldershot camp during the time aforesaid; the cost per ration for supplies to the regular militia camp under contract during the annual drill in the fall of 1912. Presented 28th March, 1913.—*Mr. Kyte*..*Not printed.*

CONTENTS OF VOLUME 28.—*Continued.*

183. Report on wholesale prices in Canada, 1912, by R. H. Coats, B.A., F.S.S., editor of the *Labour Gazette*. Presented by Hon. Mr. Crothers, 28th March, 1913....*Not printed.*

184. Area of territories added to Ontario and Quebec, by Statutes of 1912.—(*Senate*). *Not printed.*

185. Relating to recent increase in prices charged Canadian fishermen for manilla cord.—(*Senate*)........... ....*Not printed.*

186. Report of the Pilotage Commission of Quebec. Presented by Hon. Mr. Hazen, 28th March, 1913..................... ....*Not printed.*

187. Return to an Order of the House of the 26th February, 1913, for a copy of all memoranda, letters, papers, telegrams and other documents in the possession of the Department of the Interior relating to the S. W. 36-16-27, W. 2. Presented 31st March, 1913. —*Mr. Knowles*................... ....*Not printed.*

187*a*. Return to an Order of the House of the 3rd March, 1913, for a copy of all correspondence, telegrams and other papers in connection with the southwest ¼ of 4-9-14 west of 2nd meridian. Presented 10th April, 1913.—*Mr. Bradbury*...............*Not printed.*

187*b*. Return to an Order of the House of the 26th March, 1913, for a copy of all papers, letters, memoranda and other documents relating to the northwest of 30-25-7-2. Presented 25th April, 1913.—*Mr. Oliver*..*Not printed.*

187*c*. Return to an Order of the House of the 3rd March, 1913,—1. For a copy of all correspondence and other papers in connection with the disposal of the following lands and the claim of James W. Brown in connection with these lands:—

Part of S.E. ¼ section 21-20-21-W. 2nd meridian, area $\frac{5}{100}$ths acre.
Part of N.E. ¼ section 21-20-21-W. 2nd meridian, area $\frac{116}{100}$ths acre
Part of S.E. ¼ section 20-20-21-W. 2nd meridian, area 80 acres.
Part of S.W. ¼ section 28-20-21-W. 2nd meridian, area $72\frac{42}{100}$ths acres.
Whole of S.E. ¼ section 28-20-21-W. 2nd meridian, area 160 acres.
Whole of N.E. ¼ section 32-20-21-W. 2nd meridian, area 160 acres.
Part of S.E. ¼ section 32-20-21-W. 2nd meridian, area 80 acres.
Whole of N.W. ¼ section 5-21-21-W. 2nd meridian, area 160 acres.
Whole of S.E. ¼ section 5-21-21-W. 2nd meridian, area 160 acres.
Part of N.E. ¼ section 5-21-21-W. 2nd meridian, area $123\frac{85}{100}$ths acres.
Whole of S.W. ¼ section 5-21-21-W. 2nd meridian, area 160 acres.

2. Also of all papers in connection with the disposal of the whole of the northwest quarter-section 22-20-21, west of the second meridian; and part of S.W. ¼, 2-20-21-W. of the second meridian; and of all correspondence and papers in connection with Alexander Hurst Brown's claim *re* these lands. Presented 30th April, 1913.—*Mr. Bradbury* ....*Not printed.*

187*d*. Return to an Order of the House of the 9th April, 1913, for a copy of all letters, papers, telegrams and other documents in connection with the sale of the N.W. quarter-section 29-10-18-W. Presented 13th May, 1913.—*Mr. Turriff*......*Not printed.*

187*e*. Return to an Order of the House of the 28th April, 1913, for a copy of all letters, memoranda and other documents relating to the northeast quarter of 14-75-15-5, during the years 1911, 1912, and 1913 to date. Presented 13th May, 1913.—*Mr. Oliver*. *Not printed.*

CONTENTS OF VOLUME 28.—*Continued.*

187*f*. Return to an Order of the House of the 31st March, 1913, for a copy of all papers, telegrams, applications, and other documents in connection with the S.W. 2-19-20, west 2nd M. Homestead, patented 3rd June, 1892; the S. ½ of N.E. 20-20-21, west 2nd M. patented 11th October, 1904, N.W.H.B., as assignee of Edward Boucher; the S.E ¼ of 22-20-21, west 2nd M., N.W.H.B., patented 22nd September, 1900, as assignee of Louis McGillies; the S.E. ¼ of 28-20 21, west 2nd M., N.W.H.B., patented 26th August, 1901, as assignee of J. Bte. Fagant, jr., and the E. ½ of S.E. ¼ of 32-20-21, west 2nd M., N.W.H.B., patented 11th September, 1901, as assignee of Jos. Alexander; and of all papers in connection with any claims of G. W. Brown or others in connection with these lands. Presented 3rd June, 1913.—*Mr. Bradbury*....................*Not printed.*

187*g*. Return to an Order of the House of the 31st March, 1913, for a copy of all papers, telegrams, applications and other documents regarding the S.W. ¼, 28-20-21, west 2nd M., N.W.H.B., patented 1st March, 1909, as assignee of Norbert Bellehumeur; and the W. ½ of S.E. ¼, 32, 20, 21, west 2nd M., N.W.H.B., patented 1st March, 1909, as assignee of Norbert Bellehumeur; and of all papers in connection with any claims by Norman McKenzie or others against the Government in connection with these lands. Presented 4th June, 1913.—*Mr. Bradbury*..............................*Not printed.*

188. Return to an Order of the House of the 10th March, 1913, for a copy of all correspondence or communication of any kind between the Department of Insurance at Ottawa and the Department of Insurance at Toronto since June, 1907, touching the transfer of the Canadian Guardian Life Insurance Company from the jurisdiction of the Insurance Department at Ottawa to that of the jurisdiction of the Insurance Department at Toronto; of all correspondence, if any, between the Insurance Department at Ottawa and the *Saturday Night*, newspaper of Toronto, touching the affairs of the Canadian Guardian Life Insurance Company or the International Insurance Company, Limited; and of all correspondence and other communications between the Department of Insurance at Ottawa and the Government of the province of Alberta in reference to the affairs of the Canadian Guardian Life Insurance Company or the International Insurance Company, Limited. Presented 31st March, 1913.—*Mr. German.*
Not printed.

189. Copy of an Order in Council, &c., respecting a contribution of $30,000 to assist in alleviating the distress of the sufferers by the disastrous cyclone which swept over the City of Regina and its vicinity. Presented by Hon. Mr. White, 31st March, 1913.
Not printed.

190. Copy of correspondence respecting the Treaty of Commerce and Navigation between the United Kingdom and Japan. Presented by Hon. Mr. Borden, 1st April, 1913.
Printed for sessional papers only.

190*a*. From Imperial Consulate General of Japan for the Dominion of Canada. The undersigned, His Imperial Majesty's Consul General at Ottawa, duly authorized by His Government, has the honour to declare that the Imperial Japanese Government are fully prepared to maintain with equal effectiveness the limitation and control which they have since 1908 exercised in the regulation of emigration from Japan to Canada. 11th April, 1913. Presented by Hon. Mr. Borden, 11th April, 1913........*Not printed.*

191. Copy of the order in council in connection with the appointment of a Commission to inquire into the claims of the province of British Columbia for exceptional treatment. Presented by Hon. Mr. Borden, 1st April, 1913........*Printed for sessional papers only.*

191*a*. Memorandum *re* British Columbia's claims for special consideration. Presented by Hon. Mr. Borden, 1st April, 1913......................*Printed for sessional papers only.*

CONTENTS OF VOLUME 28.—*Continued.*

191*b*. Copies of orders in council, &c., relating to the appointment of commissioners to adjust all matters relating to Indian lands and Indian affairs generally in the province of British Columbia. Presented by Hon. Mr. Borden, 17th April, 1913. *Not printed.*

191*c*. Report of the Royal Commission appointed to inquire into and report upon the law respecting pilotage and its administration in the pilotage districts of Montreal and Quebec; and what changes, if any, are desirable therein; and also, a letter addressed to the Minister of Marine and Fisheries from Mr. Ajutor Lachance, one of the commissioners. Presented by Hon. Mr. Hazen, 18th April, 1913................*Not printed.*

191*d*. Report of Royal Commission on Industrial Training and Technical Education, Parts I, II, III. and IV. Presented by Hon. Mr. Crothers, 4th June, 1913. *Printed for distribution and sessional papers.*

192. Return to an Order of the House of the 24th February, 1913, for a copy of all memoranda, letters, papers and documents relating to the setting apart of a forest reserve on the north side of the Saskatchewan river opposite the City of Prince Albert. Presented 2nd April, 1913.—*Mr. Oliver*..*Not printed.*

192*a*. Return to an Order of the House of the 26th February, 1913, for a copy of all memoranda, reports, letters, and other documents of any kind in the possession of the Department of the Interior relating to the suitability for forest reserve or for homesteading purposes, of the whole or any part of townships 24 and 25, range 27, west of the first meridian, now forming part of the Riding Mountain Forest Reserve. Presented 11th April, 1913.—*Mr. Oliver*..*Not printed.*

193. Return to an Order of the House of the 10th February, 1913, for a copy of all correspondence exchanged between the Department of Marine and Fisheries and the member for Temiscouata, and all other persons, respecting the placing of a light or line of lights on wharf at Ile Verte, County of Temiscouata. Presented 4th April, 1913.—*Mr. Paquet* ....*Not printed.*

194. Copy of a report of the Committee of the Privy Council, approved by His Excellency the Administrator, on the 5th April, 1913, relative to a contract for an ocean mail, passenger and freight steamship service between Canada and Great Britain and Great Britain and Canada, together with the articles of agreement for the said service. Presented by Hon. Mr. Pelletier, 7th April, 1913..........................*Not printed.*

195. Return to an Order of the House of the 10th March, 1913, for a statement showing the total volume of trade, in import and export, respectively, between Canada and Newfoundland for each year during the period from the 1st day of January, 1896, to the 1st day of January, 1913, and of what the said trade consisted of each year.

2. The volume of trade between Newfoundland and the West Indian Islands, included in the West Indian trade agreement with Canada, dated the 9th day of April, 1912, during the years 1909, 1910, 1911 and 1912, in import and export, and of what the said import and export consisted of each year. Presented 10th April, 1913.—*Mr. McKenzie.* *Not printed.*

195*a*. Supplementary return to an Order of the House of the 10th March, 1913, for a statement showing the total volume of trade, in import and export, respectively, between Canada and Newfoundland for each year during the period from the 1st day of January, 1896, to the 1st day of January, 1913, and of what the said trade consisted of each year.

CONTENTS OF VOLUME 28.—*Continued.*

2. The volume of trade between Newfoundland and the West Indian Islands, included in the West Indian trade agreement with Canada, dated the 9th day of April, 1912, during the years 1909, 1910 1911 and 1912, in import and export, and of what the said import and export consisted of each year. Presented 21st April, 1913.—*Mr. McKenzie* .... *Not printed.*

196. Return to an Order of the House of the 9th December, 1912, for a copy of all letters, telegrams, and correspondence referring in any way to the purchase or leasing of the property in Antigonish, N.S., now in use as a gun shed or store house for the equipment of the 18th Field Battery of Artillery. Presented 14th April, 1913.—*Mr. Chisholm (Antigonish)*... *Not printed.*

197. Return to an Order of the House of the 19th March, 1913, for a copy of all tenders asking for the construction of a drill hall at Fernie, B.C., of all correspondence concerning the awarding of the contract, and of all correspondence and documents regarding said tender and contract. Presented 14th April, 1913.—*Sir Wilfrid Laurier.* *Not printed.*

197*a*. Supplementary return to an Order of the House of the 19th March, 1913, for a copy of all tenders asking for the construction of a drill hall at Fernie, B.C., of all correspondence concerning the awarding of the contract, and of all correspondence and documents regarding said tender and contract. Presented 6th June, 1913.—*Sir Wilfrid Laurier*... *Not printed.*

198. Return to an Order of the House of the 24th February, 1913, for a copy of all correspondence and documents between the government of Canada or any officer thereof, and one Miss Mastin, of England, relating to a presentation of certain chinaware and other curiosities, made to the Government by the said Miss Mastin, in memory of the defeat at the polls of the agreement relating to reciprocity with the United States. Presented 14th April, 1913.—*Mr. Sinclair*.. *Not printed.*

199. Return to an Order of the House of the 19th March, 1913, for a return showing the names, professions or occupations, residences, the date of appointment, and the salary in each case, of all correspondents of the *Labour Gazette*, and also the number of changes made in that particular for the year 1912. Presented 22nd April, 1913.—*Mr. Verville* .... *Not printed.*

200. Return to an Order of the House of the 26th March, 1913, for a return showing the amount of seed grain supplied to settlers in Peace River during the year 1912; the amount of seed grain being provided for settlers in Peace River during 1913; who distributed the seed grain supplied in 1912 and who is authorized to distribute seed grain in 1913; under what conditions seed grain was supplied during 1912, and those proposed for 1913; if provisions were supplied during 1912, what the conditions were and who gave out the supplies; if it is intended to supply provisions in 1913, what conditions will be given and who will give them out. Presented 25th April, 1913.—*Mr. Oliver* .... *Not printed.*

201. Return to an Order of the House of the 7th April, 1913, for a copy of all documents in the Department of the Interior prior to the issue of the Crown patents relating to Lot No. 217 of the Hudson Bay Company Survey, in the parish of St. John, Winnipeg. Presented 25th April, 1913.—*Mr. Proulx*.. *Not printed.*

202. Return to an Order of the House of the 31st March, 1913, for a copy of all correspondence claims and reports with reference to compensation claimed by owners of horses attached to the 10th Field Battery at Camp Petawawa in the summer of 1912, by rea-

CONTENTS OF VOLUME 28.—*Continued.*

son of damage or disease contracted while in the service; also of all such claims paid, the amounts in each case, and the persons to whom paid. Presented 25th April, 1913.—*Mr. Carvell*...*Not printed*

203. Return to an Order of the House of the 11th December, 1912, for a copy of all papers, documents, pay-rolls, accounts, receipts, and correspondence in connection with all expenditures of money made in 1912 upon the Petite Rivière breakwater, Lunenburg County, Nova Scotia. Presented 29th April, 1913.—*Mr. Maclean (Halifax).* *Not printed.*

203a. Return to an Address to His Royal Highness the Governor General of the 9th December, 1912, for a copy of all advertisements, tenders, contracts, orders in council, letters, correspondence, &c., relating to the construction of a wharf or breakwater at Seaforth, Halifax County, N.S. Presented 29th April, 1913.—*Mr. Maclean (Halifax).* *Not printed.*

203b. Return to an Order of the House of the 20th March, 1912, for a copy of all documents, letters, correspondence, petitions, reports, &c., addressed to the Department of Public Works since the 21st September last on the subject of a wharf now under construction at St. Croix, in the County of Lotbinière, province of Quebec. Presented 29th April, 1913.—*Mr. Fortier*...*Not printed.*

203c. Return to an Order of the House of the 19th March, 1913, for a return showing whether the repairs to Red Point wharf, Lot 48, Prince Edward Island, have been completed; if the work was done by tender or by day labour; if by tender, with whom the contract was made; if by day labour, the number of superintendents, inspectors, or overseers employed, their names, the number of days each did work, and the wages per day paid to each; the number of men employed, their names, the number of days each did work and the wages per day paid to each; who supplied the materials; the amount of each kind or class used, and the price paid for each kind or class; the total amount paid for materials, wages and cost of the work. Presented 2nd May, 1913.—*Mr. Hughes (Kings, P.E.I.)*...*Not printed.*

203d. Return to an Order of the House of the 31st March, 1913, for a copy of all documents, papers, correspondence, representations, &c., relating to the purchase of land at Digby, Nova Scotia, for the purpose of a site for a public wharf. Presented 2nd May, 1913.—*Mr. Maclean (Halifax)*...*Not printed.*

203e. Return to an Order of the House of the 19th March, 1913, for a return showing whether the repairs to Southport wharf, Lot 48, Prince Edward Island, have been completed; if the work was done by tender or by day labour; if by tender, with whom the contract was made; if by day labour, the number of superintendents, inspectors, or overseers employed, their names, the number of days each did work, and wages per day paid to each; the number of men employed, their names, the number of days each did work and the wages per day paid to each; who supplied the materials; the amount of each kind or class used and the price paid for each kind or class; the total amount paid for materials, wages and cost of the work. Presented 2nd May, 1913.—*Mr. Hughes (Kings, P.E.I.)*...*Not printed.*

203f. Return to an Order of the House of the 11th December, 1912, for a copy of all accounts, correspondence, telegrams, complaints and other documents in possession of the Department of Public Works, in relation to the expenditure of moneys on harbour improvements at Grand Etang, during the year 1911-12. Presented 13th May, 1913.—*Mr. Chisholm (Inverness)*.. .. ..*Not printed.*

CONTENTS OF VOLUME 28.—*Continued.*

203*g*. Return to an Order of the House of the 7th April, 1913, for a copy of all documents, correspondence, &c., relating to the purchase by the Department of Public Works of a certain quantity of timber for the construction of a wharf at St. Germain de Kamouraska, the said purchase having been made, as alleged, from Murray Castonguay during the year 1912. Presented 26th May, 1913.—*Mr. Lapointe (Kamouraska).* *Not printed.*

203*h*. Return to an Order of the House of the 29th January, 1913, for a copy of all letters written to the Honourable Minister of Public Works, or to any officer of the Public Works Department, or to any member of the government since 10th October, 1911, by G. A. R. Rowlings, John S. Wells and S. R. Griffin, relating to the construction of public works, County of Guysborough, N.S., also a copy of the replies to the same. Presented 29th May, 1913.—*Mr. Sinclair*......*Not printed.*

203*i*. Return to an Order of the House of the 7th May, 1913, for a copy of all correspondence exchanged between the Postmaster General and M. Isidore Belleau, of Quebec, in connection with improvements contemplated in Quebec harbour. Presented 2nd June, 1913.—*Mr. Carvell*......*Not printed.*

203*j*. Return to an Order of the House of the 28th April, 1913, for a copy of all papers, documents, pay-rolls, receipts, accounts, correspondence, &c., relating to repairs made upon the breakwater at Petite Rivière, Lunenburg County, N.S., in the year 1912. Presented 6th June, 1913.—*Mr. Maclean (Halifax)*......*Not printed.*

204. Return to an Order of the House of the 4th March, 1912.—1. For a copy of all reports of engineers from 1874 to 1900, relating to the most suitable site in the harbour of Quebec for the construction of a dry dock.

2. Of all correspondence exchanged on the subject of a choice of a site for the dry dock now existing at St. Joseph de Lévis, at the time of its construction.

3. Of engineers reports, plans, maps and bearings relating to the construction of a new dry dock in the port of Quebec since 1900.

4. Of all correspondence exchanged between the different companies and the government relating to the construction of a new dry dock in the port of Quebec, since 1909.

5. Also for the production of all documents submitted by the different companies who have asked for the government grant provided by the Dry Dock Subsidies Act. Presented 29th April, 1913.—*Mr. Béland*......*Not printed.*

204*a*. Dry dock of Lévis. Report of Mr. Charles Smith against Sampson, et al.—(*Senate*). *Not printed.*

204*b*. Return to an Address to His Royal Highness the Governor General of the 19th March, 1913, for a copy of all orders in council, plans and estimates, correspondence, papers and inquiries respecting the construction of a dry dock at Quebec or Lévis or in the port or harbour of Quebec. Presented 6th June, 1913.—*Mr. Lachance....Not printed.*

205. Return to an Order of the House of the 9th April, 1913, for a copy of the petition of the Restigouche Fishermen's Association to the Minister of Marine and Fisheries asking for the removal of Mr. M. M. Mowat, head guardian of the Restigouche Riparian Association as Dominion fishery officer, and the answer thereto. Presented 2nd May, 1913.—*Mr. Marcil (Bonaventure)*......*Not printed.*

206. Return to an Order of the House of the 13th February, 1913, for a return showing the name of the company who has the contract for the electric lighting of the government buildings and grounds in Ottawa, date of contract and period, on what notice can contract be cancelled, price paid per kilowatt hour for electric lighting, names of

CONTENTS OF VOLUME 28.—*Continued.*

buildings lighted, cost of lighting each per year, rate for electric lighting if a combined power and light rate, price for current for power purposes, if lamps are not free, price paid for the carbon and tungsten lamps renewed, are lamps marked so as to be identified as belonging to the government buildings, number of electric lamp renewals paid for during the last fiscal year, where required, number of carbon and tungsten lamps respectively in use in the several buildings and the candle power or wattage of the same. Presented 2nd May, 1913.—*Mr. Wilson (Wentworth)*
Not printed.

207. Return to an Order of the House of the 17th February, 1913, for a copy of all correspondence, letters, telegrams, petitions, memoranda, reports, tenders, deposits, recommendations and all other documents of any nature whatsoever bearing on or having relation to the erection of a public building in the city of Three Rivers, P.Q., since the 11th day of October, 1911, to date. Presented 2nd May, 1913.—*Mr. Bureau.*
Not printed.

207*a*. Return to an Order of the House of the 26th May, 1913, for a copy of all papers, letters, and documents relating to the construction of a public building in the town of Laurentides, County of L'Assomption. Presented 4th June, 1913.—*Mr. Seguin.*
Not printed.

207*b*. Return to an Order of the House of the 2nd April, 1913, for a copy of all correspondence, letters, telegrams, contracts, tenders and reports of government inspector, in relation to the work and repairs on the public building at North Sydney during the year 1912, and particularly the inspector's report on the damages caused by fire during the construction of said works and repairs; and also a copy of the tenders of Henry Lovell, for the above work. Presented 6th June, 1913.—*Mr. McKenzie.*
Not printed.

207*c*. Return to an Order of the House of the 27th January, 1913, for a copy of all telegrams, letters, documents and plans relative to the purchase or acquirement of land for the purpose of erecting a public building in Stellarton, Nova Scotia, in the year 1912. Presented 6th June, 1913.—*Mr. Macdonald*..................................*Not printed.*

208. Return to an Order of the House of the 24th February, 1913, for a return showing the names of the buildings occupied by the Government as public offices, which are under rent, excepting the Centre, East, West and Langevin Blocks; the street on which each of these offices is situated and the number of the street in each case. Presented 2nd May, 1913.—*Mr. Boulay*..*Not printed.*

209. Return to an Order of the House of the 11th December, 1912, for a copy of all accounts, correspondence, telegrams, complaints and other documents in possession of the Department of Public Works, relating to the construction of telegraph lines during the year 1911-12, from South West Margaree to Scotsville, from Scotsville to North Ainslee; from Scotsville to South Lake Ainslee and Whycocomagh; from Little Narrows to Whycocomagh; from Rossville to Big Intervale and from Rossville to the Victoria County Boundary Line, all in the County of Inverness. Presented 2nd May, 1913.—*Mr. Chisholm (Inverness)*..*Not printed.*

210. Correspondence in connection with the area or areas prescribed for mange in British Columbia.—(*Senate*)..*Not printed.*

211. Report made by the Central Railway of Canada to the Railway Department.—(*Senate*).
Not printed.

CONTENTS OF VOLUME 28.—*Continued.*

212. Return to an Address to His Royal Highness the Governor General of the 10th February, 19.3, for a copy of all orders in council, letters, telegrams and of all other official documents of any kind in the possession of the Department of Customs, relating to the seizures of twenty horses from John Gobel, for smuggling them across the United States boundary near Coutts, or Writing-on-Stone, between the 20th and 28th of February, 1911. Presented 5th May, 1913.—*Mr. MacNutt*..............*Not printed.*

213. Return to an Address to His Royal Highness the Governor General of the 10th February, 1913, for a copy of all orders in council, letters, telegrams and of all other official documents of any kind in the possession of the Department of the Interior, relating to sale of school lands which have been held in the provinces of Alberta and Saskatchewan since the 12th day of October, 1911. Presented 7th May, 1913.—*Mr. McCraney*............ ....*Not printed.*

213*a*. Return to an Order of the House of the 2nd April, 1913, for a return showing by quarter-section, or fraction of quarter-section, all school lands sold in Manitoba, Saskatchewan and Alberta during the calendar year 1912; the price per acre at which each separate parcel was sold; the name and address of each purchaser; a list of all school lands sold at above sales which have since been cancelled; the price at which each parcel of said cancelled lands were sold, with the names and addresses of purchasers of each parcel of said lands sold and subsequently cancelled. Presented 23rd May, 1913.—*Mr. Turriff*......................... ....*Not printed.*

213*b*. Return to an Order of the House of the 12th February, 1913, for a return showing all school lands sold in the province of Saskatchewan in 1912, giving each parcel of land sold, the name and address of each purchaser, the date and place of sale, the name of the auctioneer at each sale, and any assignments of contracts of purchase of which the government has notice, and a copy of all correspondence passing between the Government, or any member thereof, and the Government of the province of Saskatchewan or any member thereof, with respect to the sale of school lands in the said province. Presented 6th June, 1913.—*Mr. Martin (Regina)*..........................*Not printed.*

214. Return to an Order of the House of the 9th April, 1913, for a copy of all petitions, affidavits, specifications, plans, drawings, claims, certificates, papers and patent rights in the Department of Agriculture or the Patents Branch thereof, with respect to Patent Number 142823. Presented 7th May, 1913.—*Mr. Carvell*............*Not printed.*

215. Return to an Order of the House of the 28th April, 1913, for a copy of all memorials, petitions, and letters, addressed to or sent by the Minister of Agriculture, or on his behalf, in connection with the establishment of an agricultural school, model farm or demonstration station at New Carlisle, Quebec. Presented 9th May, 1913.—*Mr. Marcil (Bonaventure)*................. ....*Not printed.*

216. Return to an Order of the House of the 28th April, 1913, for a copy of all telegrams, correspondence, returns, &c., between the Department of Agriculture, and any other person or persons, requesting recently that the Veterinary Director General of Canada visit Nova Scotia. Presented 9th May, 1913.—*Mr. Maclean (Halifax).*
Not printed.

217. Extent to which the Franking privilege is used by the several provinces in Canada for statistics.—(*Senate*)................. ....*Not printed.*

218. Return to an Order of the House of the 29th January, 1913, for a copy of all diaries and other documents relating to and showing the work performed during the months of June and July, 1912, by Homestead Inspectors Rathwell and Erratt in the Moosejaw land district. Presented 16th May, 1913.—*Mr. Knowles*....................*Not printed.*

CONTENTS OF VOLUME 28.—*Continued.*

218*a*. Return to an Order of the House of the 29th January, 1913, for a copy of all diaries relating to and showing the work performed during the months of June and July, 1912, by Homestead Inspectors Brandt, Balfour, Ouelette and Sipes, in the Regina land district. Presented 16th May, 1913.—*Mr. Martin (Regina)*........*Not printed.*

218*b*. Return to an Order of the House of the 29th January, 1913, for a return showing the expenses of Homestead Inspectors Brandt, Balfour, Ouelette and Sipes during the months of June and July, 1912. Presented 16th May, 1913.—*Mr. Martin (Regina).* *Not printed.*

218*c*. Return to an Order of the House of the 29th January, 1913, for a return showing the expenses of Homestead Inspector Miller of the Moosejaw land district during the months of June and July, 1912, together with a copy of all reports, proceedings, diaries and other documents, showing the work performed during the said time by the said homestead inspector. Presented 16th May, 1913.—*Mr. Knowles*............*Not printed.*

218*d*. Return to an Order of the House of the 29th January, 1913, for a copy of all diaries and other documents relating to and showing the work performed during the months of June and July, 1912, by Homestead Inspectors Shields and McLaren, in the Swift Current lands district. Presented 23rd May, 1913.—*Mr. Knowles*........*Not printed.*

218*e*. Return to an Order of the House of the 29th January, 1913, for a return showing the expenses of Homestead Inspectors Shields, McLaren, Erratt and Rathwell, during the months of June and July of 1912. Presented 26th May, 1913.—*Mr. Knowles.* *Not printed.*

219. Return to an Order of the House of the 26th March, 1913, for a copy of all papers, memoranda, and instructions relating to a certain area of land on the bank of Little Manitou Lake, Saskatchewan, recently transferred to the town of Waterous, for park purposes. Presented 16th May, 1913.—*Mr. Oliver*..........................*Not printed.*

220. Return to an Order of the House, of the 4th December, 1912, for a copy of all correspondence and other documents in the possession of the Department of Public Works relating to the proposed interprovincial bridge between Hawkesbury, Ontario, and Grenville, Quebec. Presented 26th May, 1913.—*Mr. Proulx*...............*Not printed.*

221. Return to an Order of the House of the 1st April, 1913, for a copy of all complaints, charges, evidence and reports in connection with the investigation held at Aldershot, N.S., in September, 1912, relating to the alleged thefts of property from the militia camp. Presented 26th May, 1913.—*Mr. Kyte*.............................*Not printed.*

221*a*. Return to an Order of the House of the 21st April, 1913, for a copy of all notices, tenders, contracts and correspondence relating to the supplying of ice for the military comp at Aldershot, N.S., for 1913, and of all correspondence relating to the source of such ice supply. Presented 26th May, 1913.—*Mr. Kyte*.................*Not printed.*

222. Return to an Order of the House of the 17th February, 1913, for a copy of all letters, proposals, tenders, memoranda, papers and documents in the possession of the Department of Trade and Commerce, or any department of the Government, bearing date since 1st December, 1912, relating to steamship service between Canada and the West Indies. Presented 27th May, 1913.—*Mr. Maclean (Halifax)*...............*Not printed.*

222*a*. Return to an Order of the House of the 2nd April, 1913, for a copy of all correspondence, petitions, letters, telegrams, and other documents in the Department of Trade and Commerce, or any department of the Government, relating to the SS. service,

CONTENTS OF VOLUME 28.—*Continued.*

between Mulgrave, County of Guysborough and Cheticamp, Inverness County, during the years 1910-11, 1911-12, and 1912-13, and the service to be continued during the year 1913-14. Presented 27th May, 1913.—*Mr. Chisholm (Inverness)*...........*Not printed.*

223. Return to an Order of the Senate calling upon the Clerk of the House to furnish a statement showing the number of Bills passed by the House of Commons since Confederation, which have been:—1. Amended by the Senate. 2. Rejected by the Senate. 3. Amended by the Senate and accepted by the Commons.—*(Senate)*......*Not printed.*

224. Return to an Order of the House of the 14th May, 1913, showing whether a contract was passed by the Post Office Department in the year 1911, for the use of stamp vending machines, the terms of said contract, the date, and by whom signed. Presented 2nd June, 1913.—*Mr. Lemieux*..*Not printed.*

225. Ordinances of the Yukon Territory, passed by the Yukon Council in the year 1913. Presented by Hon. Mr. Coderre, 2nd June, 1913..........................*Not printed.*

226. Names of judges of Superior and Circuit Court in province of Quebec, date of appointment, &c.—*(Senate)*.................... ....*Not printed.*

227. Return to an Order of the House of the 19th May, 1913, for a return showing the per capita taxation for the year ending 31st March, 1913, and for each of the twelve preceding years. Presented 3rd June, 1913—*Mr. Hughes (Kings, P.E.I.)*....*Not printed.*

228. Return to an Order of the House of the 29th May, 1913, for a return showing whether a certificate has been issued by the Treasury Board authorizing the transfer of the assets and liabilities of La Banque Internationale du Canada to the Home Bank; the terms of the said transfer, and all documents bearing on this question. Presented 3rd June, 1913.—*Mr. Lemieux*....................... ....*Not printed.*

229. Report of the Canadian delegates to the International Conference, held at New York for the consideration of the Commemoration of the First Century of Peace between the United States and the British Empire. Presented by Hon. Mr. Borden, 5th June, 1913............ ....*Not printed.*

230. Return to an Address to His Royal Highness the Governor General of the 10th March, 1913, for a copy of all correspondence, memoranda, orders in council, departmental orders and reports from fishery overseers or other officers, during the past two years, relating to weir licenses in the waters of the Counties of Charlotte and St. John, Province of New Brunswick. Presented 6th June, 1913.—*Mr. Pugsley*..........*Not printed.*

231. Return to an Order of the House of the 24th February, 1913, for a copy of all letters and papers relating to the issue of half-breed scrip, warrant No. 2155, certificate No. 672, to Albert St. Denis, and the disposition of the said scrip. Presented 6th June, 1913.—*Mr. Oliver*..................... ....*Not printed.*

232. Return to an Address to His Royal Highness the Governor General of the 3rd February, 1913, for a copy of all papers in connection with the withdrawal from settlement of a strip of land one mile in width along the line of the Hudson Bay Railway, and of the order in council, and also of all plans and correspondence in connection with the same, prior and subsequent thereto. Presented 6th June, 1913.—*Mr. Graham.* *Not printed.*

233. A return to an Order of the Senate dated 7th March, 1913, for a copy of all papers, letters, petitions, contracts and other papers relating in any way to the purchase of land at Le Pas for terminus of Hudson Bay road.—*(Senate)*...........*Not printed.*

ANNUAL REPORT

OF THE

DEPARTMENT OF THE INTERIOR

FOR THE

Fiscal Year ending March 31, 1912

PRINTED BY ORDER OF PARLIAMENT

OTTAWA
PRINTED BY C. H. PARMELEE, PRINTER TO THE KING'S MOST
EXCELLENT MAJESTY
1912

[No. 25—1913.]

To His Royal Highness, Field Marshal, Prince Arthur William Patrick Albert, Duke of Connaught and Strathearn, K.G., K.T., &c., &c., &c., Governor General and Commander-in-Chief of the Dominion of Canada.

MAY IT PLEASE YOUR ROYAL HIGHNESS:

The undersigned has the honour to lay before Your Royal Highness the report of the transactions of the Department of the Interior for the fiscal year ending March 31, 1912.

Respectfully submitted,

R. ROGERS,
Minister of the Interior.

OTTAWA, October 19, 1912.

TABLE OF CONTENTS.

PAGE.
Report of the Deputy Minister of the Interior ix

PART I.—DOMINION LANDS.

No. 1 Report of the Commissioner 3
2 " Inspector of Dominion Lands Agencies (H. G. Cuttle) . . . 4
3 " " " " (J. W. Martin) . . . 10
4 " Agent at Battleford 12
5 " " Brandon 13
6 " " Calgary 14
7 " " Dauphin 16
8 " " Edmonton 18
9 " " Estevan 20
10 " " Grande Prairie 21
11 " " Grouard 23
12 " " Humboldt 24
13 " " Kamloops 25
14 " " Lethbridge 28
15 " " Medicine Hat 29
16 " " Moosejaw 32
17 " " New Westminster 34
18 " " Prince Albert 35
19 " " Red Deer 38
20 " " Regina 40
21 " " Saskatoon 41
22 " " Swift Current 43
23 " " Winnipeg 45
24 " " Yorkton 46
25 " Mining Lands and Yukon branch 47

YUKON TERRITORY.

25a Report of the Commissioner of the Yukon Territory 62
25b " Comptroller 64
25c " Gold Commissioner 65
25d " Crown Timber and Land Agent 71
25e " Director of Surveys 73
25f " Assistant Gold Commissioner 79

26 Report of the Timber and Grazing Branch 84
26a " Crown Timber Agent at Winnipeg 89
26b " " Edmonton 99
26c " " Calgary 110
26d " " Prince Albert 117
26e " " New Westminster 122
26f " " Kamloops 128
26g " Inspector of Crown Timber Agencies 132
26h " Inspector of Ranches 139
27 " Superintending Accountant 140

Page.
No. 28 Report of the School Lands Branch . . . 157
29 “ Land Patents Branch . . . 168
30 “ Ordnance and Admiralty Lands Branch . . . 197
31 “ Correspondence Registration Branch . . . 204
32 “ Correspondence Comparing and Mailing Branch . . . 206
33 “ Chief Geographer . . . 207
34 “ Survey Records Branch . . . 208
35 “ Water-power Branch . . . 210

PART II.—IMMIGRATION.

Report of the Superintendent of Immigration . . . 3
“ Chief Controller of Chinese Immigration . . . 67

OPERATIONS IN EUROPE.

No. 1 Report of the High Commissioner . . . 69
2 “ J. Obed Smith, Assistant Superintendent of Emigration . . . 71
3 “ A. F. Jury, Agent at Exeter . . . 76
4 “ W. B. Cumming, Agent at Aberdeen . . . 79
5 “ M. McIntyre, Agent at Glasgow . . . 80
6 “ E. O'Kelly, Agent at Dublin . . . 81
7 “ John Webster, Agent at Belfast . . . 83
8 “ J. K. Millar, Agent at Birmingham . . . 85
9 “ John McLennan, Agent at Liverpool . . . 86
10 “ L. Burnett, Agent at York . . . 87
11 “ D. Treau de Cœli, Agent at Antwerp . . . 88
12 “ Paul Wiallard, Agent at Paris . . . 90

OPERATIONS IN THE UNITED STATES.

Report of the Inspector of United States Agencies and Press Agent . . . 91

OPERATIONS IN WESTERN CANADA.

Report of the Commissioner of Immigration . . . 93

JUVENILE IMMIGRATION.

Report of the Chief Inspector of British Immigrant Children and Receiving Homes . . . 99

BORDER INSPECTION OF IMMIGRANTS.

No. 1 Report of Travelling Inspector T. B. Willans . . . 111
2 “ H. G. Herbert . . . 115

MEDICAL INSPECTION SERVICE.

Report of the Chief Medical Officer . . . 123

PART III.—SURVEYS.

Report of the Surveyor General . . . 3

APPENDICES.

PAGE.
No. 1 Schedule of Surveyors Employed and Work Executed.............. 23
2 Schedule showing Miles Surveyed and Cost.......................... 32
3 Yukon Territory Surveys.. 33
4 " Miscellaneous.. 35
5 Work Executed in Office of Chief Draughtsman..................... 36
6 List of New Editions of Sectional Maps Issued..................... 37
7 Work Executed in Photographic Office 38
8 " Lithographic Office.. 39
9 List of Employes of Topographical Surveys Branch............... 40
10 List of Dominion Land Surveyors Supplied with Standard Measures... 44
11 The Copying Camera.
12 Results of Observations for Magnetic Declination.
13 to 51 Reports of Surveyors Employed.

NOTE.—Appendices Nos. 11 to 51 will appear in the monograph form only.

PART IV.—CHIEF ASTRONOMER.

NOTE.—This part, comprising the Report of the Chief Astronomer and Appendices, will appear in monograph form only.

PART V.—DOMINION PARKS.

Report of the Commissioner of Dominion Parks........................ 3

APPENDICES.

No. 1 Report of the Chief Superintendent of Dominion Parks............ 10
2 " Superintendent of Rocky Mountains Park............ 19
2a " Curator of Banff Museum........................... 26
" " Meteorological Tables............... 29
2b Visitors at the Park... 36
2c The Alpine Club of Canada............................. 39
2d Statistical Summary... 41
3 Report of the Superintendent of Yoho and Glacier Parks 44
4 " " Buffalo Park.................... 49
5 " " Elk Island Park 51
6 " " Waterton Lake Park............ 52
7 " " St. Lawrence Island Parks......... 55

PART VI.—FORESTRY AND IRRIGATION.

No. 1 Report of the Director of Forestry.............................. 3

APPENDICES.

No. 2 Report of H. R. McMillan.. 26
3 " A. Knechtel, Inspector of Forest Reserves............... 28
4 " Norman M. Ross, Chief, Tree Planting Division........... 41
5 " S. S. Sadler, Assistant in Tree Planting Division.......... 49
6 " A. P. Stevenson, Inspector of Tree Plantations............ 52
7 " Angus Mackintosh, Inspector of Tree Plantations.......... 54
8 " Walter B. Guiton, Inspector of Tree Plantations.......... 56

PAGE.

No. 9 Report of James Kay, Inspector of Tree Plantations.................. 58
10 “ Wm. Macdonald, Inspector of Tree Plantations........... 62
11 “ James Cowie, Inspector of Tree Plantations.............. 64
12 “ Geo. Kennedy, Inspector of Tree Plantations............. 66
13 “ Edward Walmsley, Acting Crown Timber Agent at New Westminster.................................... 68
14 “ R. J. Stewart, Chief Fire Ranger...................... 71
15 “ Letellier O'Connor, Inspector........................ 73
16 “ H. A. Conroy, Inspector, Treaty No. 8................ 76
17 “ George Douglas, Chief Fire Ranger.................... 77
18 “ A. L. Robertson, Chief Fire Ranger................... 79
19 “ Andrew Freeman, Crown Timber Agent, Winnipeg 80
20 “ James T. Blackford. Chief Fire Ranger............... 81
21 “ P. Z. Caverhill, Forest Assistant.................... 84
22 “ H. Claughton-Wallin, Forest Assistant............... 85
23 “ G. H. Edgecombe, Forest Assistant.................... 90
24 “ E. G. McDougall, Forest Assistant, on Porcupine Hills..... 94
25 “ “ “ lands near Fort à la Corne 99
26 “ “ “ lands near Prince Albert 101
27 “ W. J. Vandusen, Forest Assistant..................... 105
28 “ Frank M. Beard, Forest Assistant..................... 110
29 “ J. W. Curry.. 119
30 “ Geo. A. Mulloy... 132
31 “ “ 136
32 “ “ 138
33 “ “ 140
34 “ “ 142
35 “ A. J. Bell, Agent at Fort Smith....................... 144
36 “ E. F. Drake, on Shipment of Reindeer.................. 146
37 “ “ “ “ 160

IRRIGATION AND HYDROGRAPHIC SURVEYS.

38 Report of the Commissioner of Irrigation and Chief Engineer........ 162
39 “ Ralph J. Burley, Division Engineer, on Maple Creek District.. 174
40 “ W. A. Fletcher, Inspecting Engineer, Maple Creek District, Western Section..................................... 179
41 “ F. T. Fletcher, Inspecting Engineer, on Maple Creek District, Eastern Section............................... 182
42 “ Ralph J. Burley, on Crops in Maple Creek District.......... 185
43 “ J. C. Milligan, Inspecting Engineer, on Calgary District...... 192
44 “ “ on Crops in Calgary District 195
45 “ P. J. Jennings, Special Inspecting Engineer............... 196
46 “ P. M. Sauder, Chief Hydrographer, on Stream Measurements.. 199
47 “ N. M. Sutherland, District Hydrographer 212
48 “ Commissioner of Irrigation on Levelling Operations........ 216
49 “ “ on Reservoir Site Surveys............... 218
50 “ “ on South Saskatchewan River Diversion Canal 220
51 “ “ on Current Meter Rating Station at Calgary. 228

REPORT

OF THE

DEPUTY MINISTER OF THE INTERIOR

1911-12

Department of the Interior,
Ottawa, August 29th, 1912.

To the Honourable Robert Rogers,
Minister of the Interior.

Sir,—I have the honour to submit the thirty-ninth annual report of the Department of the Interior for the twelve months ending 31st March, 1912.

I am glad to be in a position to state that on the whole the work of the Department has been highly satisfactory. As will be observed from the statements submitted, there has been a large increase in the number of arrivals; a large increase also in the total revenue from all sources, but more especially from the disposal and administration of Dominion Lands, and while there was a falling off in the number of free homestead entries granted during the year as corresponding with the previous twelve months, the fact remains that over thirty-nine thousand settlers, representing ninety-one thousand three hundred and seventy-two souls, found it to their advantage to locate upon the arable lands within surveyed areas of the Western Provinces during the past departmental year. While this number is less than what it was in 1911, it is, nevertheless, of such magnitude as to clearly attest the permanency of the unprecedented movement of agriculturists towards the western wheat fields.

I wish to draw more particular attention to the statement immediately following which shows the land situation throughout the Western Provinces and also to the statements furnished by the Superintendent of Immigration as regards the large number of arrivals during the past twelve months from Great Britain, Ireland and the United States. There would appear to be no doubt that on the whole Canada has been receiving a high class of immigrants. This condition is strongly supported by the fact that, although a somewhat smaller number of settlers took up free homesteads this year than did those of last year, railway companies and other corporations that received land subsidies from the Government in order to assist them in the construction of their lines have had the opportunity of disposing of a very considerable area of their holdings to actual settlers, the total proceeds of these sales amounting to over $18,200,000. This would indicate that the class of immigrants that have found their way to Canada were possessed of considerable means, as no doubt many of them found it to their advantage to acquire improved farms—although the average price therefor per acre was $13.70—instead of taking up ordinary free homesteads.

I deem it my duty to mention here that, in view of the growth of the work of the Department within recent years, as evidenced by the continued increase in the number of officers and officials employed at headquarters, it is a subject for congratulation that the general business connected with the proper administration of this important branch of the public service should be in such a satisfactory condition, keeping in view the great disadvantage to which we are subjected owing to the lack of proper office accommodation. However, notwithstanding this drawback, it affords me pleasure to be in a position to testify that the work in every branch of the Department is well up to date and that the general administration would appear to be giving entire satisfaction to the public.

DEATHS.

I regret to have to report that there were ten deaths in the Department during the past year, four at headquarters and six in the Outside Service. The following is a list of the persons who died:—

Head Office.

Robert Dunlop, Secretary's Branch, died 23rd April, 1911.
Alex. S. Robertson, Patent Branch, died 10th June, 1911.
L. P. Connelly, Timber and Grazing Branch, died 28th September, 1911.
R. E. Young, Chief Geographer, died 24th October, 1911.

Outside Service.

James Leamy, Crown Timber Agent, New Westminster, B.C., died 8th May, 1911.
F. W. Annand, Immigration Agent, Halifax, N.S., died 12th May, 1911.
D. S. McGregor, Sub-Agent Dominion Lands, Rosthern, Sask., died 30th June, 1911.
R. D. Foley, Dominion Lands Office, Winnipeg, Man., died 24th February, 1912.
J. N. Hiron, Sub-Agent Dominion Lands, Canora, Sask., died 21st February, 1912.
Frank Edenhofer, Dominion Lands Office, Prince Albert, Sask., died 2nd March, 1912.

STATEMENT showing Gross Cash Revenue received from all sources during the Fiscal Year ended March 31, 1912, compared with the receipts for the previous Fiscal Year.

Source of Revenue.	Fiscal Year 1911-12.	Fiscal Year 1910-11.	Increase.	Decrease.	Net Increase.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Dominion Lands	3,973,259 74	3,302,279 57	670,980 17		
School Lands	1,594,533 96	1,614,733 93		20,199 97	
Ordnance Lands	11,566 46	6,009 34	5,557 12		
Seed Grain	119,634 13	153,351 14		33,717 01	
Casual Revenue	32,824 65	11,336 06	21,488 59		
Registration Fees, Yukon	1,066 05	1,378 19		312 14	
Fines and Forfeitures, N.W.T.	341 00	184 80	156 20		
Fines under Immigration Act	10,169 48	3,867 42	6,302 06		
Chinese Immigration Revenue, Oct. 2, 1911, to March 31, 1912	971,339 00		971,339 00		
Total	6,714,734 47	5,093,140 45	1,675,823 14	54,229 12	1,621,594 02

NOTE.—*Re* Chinese Immigration Revenue.

Collected by Trade and Commerce Department, from April 1, 1911, to Oct. 1, 1911	$2,078,383 00
" Department of the Interior, from Oct. 2, 1911, to March 31, 1912	971,339 00
Total Chinese Immigration Revenue, 1911-1912	$3,049,722 00

STATEMENT of Receipts on account of Dominion Lands Revenue for the Fiscal Year ended March 31, 1912, as compared with the receipts for the previous year. (Net cash revenue.)

Particulars.	1911-12.	1910-11.	Increase.	Decrease.	Net Increase.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Homestead fees	391,703 12	445,135 00	....	53,431 88	
Pre-emption fees	102,070 00	156,485 00	....	54,415 00	
Purchased homestead fees	13,930 00	18,830 50	....	4,900 50	
Improvements	184,825 92	143,227 13	41,598 79	....	
Pre-emption sales under Act of 1908	877,235 84	266,878 98	610,356 86	....	
Purchased homestead sales	423,282 89	376,309 15	46,973 74	....	
General sales	666,664 12	550,567 91	116,096 21	....	
Map sales, office fees, &c	11,239 14	8,730 01	2,509 13	....	
Rentals of lands	11,672 09	10,216 99	1,455 10	....	
Survey fees	30,623 15	15,507 56	15,115 59	....	
Timber dues	400,668 61	387,054 96	13,613 65	....	
Grazing lands	69,519 41	60,702 80	8,816 61	....	
Coal lands	440,501 92	490,538 27	....	50,036 35	
Hay permits	9,923 22	7,808 43	2,114 79	....	
Mining fees	75,118 42	72,412 98	2,705 44	....	
Hydraulic leases	15,602 55	6,127 00	9,475 55	....	
Dredging leases	4,020 96	4,007 18	13 78	....	
Export tax on gold	100.606 29	103,168 19	....	2,561 90	
Free certificates for export of gold	118 50	152 50	....	34 00	
Stone quarries	9,938 86	5,037 60	4,901 26	....	
Irrigation fees	793 72	806 25	....	12 53	
Rent of water power	11,272 92	2,443 69	8,829 23	....	
Fees *re* Board of Examiners--D.L.S.	1,400 00	1,310 00	90 00	....	
Patent and interchange fees	815 50	1,312 35	....	496 85	
Suspense account	1,660 29	4,876 17	....	3,215 88	
Interim receipt accounts—Yukon	211 50	270 50	....	59 00	
Sand, stone and gravel	11,421 55	11,956 50	....	534 95	
Petroleum	49,226 65	70,110 68	....	20,884 03	
Rocky Mountains Park	52,027 63	65,513 58	....	13,485 95	
Jasper Park	3,492 85	2,601 19	891 66	....	
Yoho Park	491 08	743 10	....	252 02	
Waterton Lakes Park	284 68	106 72	177 96	....	
Buffalo Park	158 32	80 00	78 32	....	
Elk Island Park	43 18	10 00	33 18	....	
Miscellaneous	....	11,240 70	....	11,240 70	
Forestry Branch, sale of trees, &c.	694 86	....	694 86	....	
	3,973,259 74	3,302,279 57	886,541 71	215,561 54	670,980 17
Refunds	197,402 77	193,544 07	3,858 70	....	
	3,775,856 97	3,108,735 50	882,683 01	215,561 54	667,121 47

STATEMENT showing Receipts on Account of Dominion Lands from July 1, 1872, to March 31, 1912

Fiscal Year.	Homesteads Fees.	Pre-emption Fees.	Improvements.	Sales.		Map Sales, Office and Registration Fees, &c.	Dominion Lands Surveyors Examination Fees.	Rentals, Survey Fees, Miscellaneous, including Trust Account.	Purchased Homestead, Inspection, Cancellation and Sundry Fees.	Timber Dues.
				Cash.	Scrip.					
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
1872-73.	6,960 00	....	....	19,170 20	....	....	....	....	....	109 25
1873-74.	7,310 00	....	....	19,834 75	....	....	....	125 50	....	2,710 55
1874-75.	11,510 00	....	....	13,666 90	....	129 00	....	....	....	2,335 25
1875-76.	4,680 00	....	....	3,478 94	320 00	....	....	....	....	387 00
1876-77.	2,250 00	....	....	1,085 86	136,955 16	4 00	....	100 00	40 00	320 00
1877-78.	14,540 00	....	....	2,794 86	120,159 54	....	180 00	....	290 00	1,620 00
1878-79.	17,690 00	....	....	4,998 39	210,904 84	81 00	310 00	13 70	410 00	325 00
1879-80.	41,255 00	10,241 43	....	45,708 97	81,685 86	245 40	580 00	183 25	1,780 00	25,121 46
1880-81.	20,450 00	10,801 75	269 00	71,170 17	70,828 30	985 40	420 00	37 58	....	32,028 34
1881-82.	54,155 00	39,843 90	1,758 00	1,240,328 27	50,590 84	3,036 45	890 00	58 10	....	58,753 14
1882-83.	73,015 00	54,725 00	7,114 91	516,092 21	33,638 40	3,109 50	890 00	501 77	....	90,066 46
1883-84.	41,580 00	28,810 00	2,596 11	424,863 36	40,919 67	1,289 55	530 00	45,766 53	1,713 45	147,983 10
1884-85.	25,645 00	17,100 00	2,328 75	199,275 32	45,875 60	1,621 82	370 00	50,068 57	2,685 00	87,474 99
1885-86.	26,110 00	14,371 00	1,101 50	76,140 41	214,657 97	1,339 34	360 00	20,070 00	5,025 00	64,820 31
1886-87.	19,614 00	6,887 93	1,971 55	48,175 76	337,640 19	1,171 39	240 00	44,561 00	7,778 40	65,111 74
1887-88.	23,691 00	4,830 00	1,918 35	52,238 36	313,522 67	1,660 75	240 00	20,591 41	12,078 53	94,964 55
1888-89.	39,460 00	10,550 00	4,128 48	57,513 16	318,238 57	1,410 16	220 00	10,389 57	20,402 50	90,290 00
1889-90.	35,920 00	8,580 00	3,250 54	54,896 85	228,744 47	2,099 07	190 00	3,316 23	20,232 50	84,642 95
1890-91.	29,164 10	....	6,302 61	91,664 98	171,425 14	1,854 78	88 00	7,951 05	14,712 50	102,902 71
1891-92.	46,994 00	....	6,472 31	108,901 01	97,822 41	2,147 31	135 00	29,898 49	23,104 50	106,461 35
1892-93.	37,689 74	....	7,113 50	93,671 67	77,231 18	975 20	82 00	18,509 35	22,014 00	105,865 24
1893-94.	36,462 26	....	3,497 76	53,254 71	27,840 96	973 11	40 00	13,457 09	11,097 00	81,290 51
1894-95.	29,664 88	....	3,567 90	37,293 71	23,269 62	695 99	....	6,271 77	6,566 90	74,079 20
1895-96.	18,278 00	....	3,163 15	46,373 98	46,929 65	610 78	50 00	21,679 31	6,810 50	61,923 47
1896-97.	21,179 00	....	3,737 01	49,335 53	16,929 38	795 05	70 00	19,421 98	8,527 50	68,992 82
1897-98.	34,780 00	....	5,649 63	80,178 64	28,918 14	1,987 40	10 00	21,242 66	10,042 00	119,313 78
1898-99.	58,235 00	....	4,297 62	116,598 35	21,307 58	1,262 05	20 00	75,085 95	13,549 50	155,360 63
1899-1900.	72,690 00	....	4,835 81	103,247 58	88,756 22	1,258 85	190 00	38,072 54	14,937 00	126,345 82
1900-1901.	79,910 00	....	5,213 32	40,360 93	326,270 03	3,874 14	165 00	70,970 54	12,722 00	209,399 32
1901-1902.	144,425 00	....	8,481 46	66,950 21	169,767 13	5,792 96	370 00	71,997 30	663 00	207,790 90
1902-1903.	320,409 65	....	11,829 08	155,507 59	158,452 66	5,911 96	365 00	125,158 56	595 00	470,916 93
1903-1904.	255,772 36	....	15,119 47	196,750 15	188,424 22	5,549 13	463 50	81,550 46	1,081 00	397,344 33
1904-1905.	304,806 25	....	21,571 25	154,128 04	19,644 59	4,879 13	906 50	144,924 31	1,205 00	266,951 46
1905-1906.	417,834 25	....	31,795 19	442,588 69	7,654 57	6,042 34	474 00	141,948 55	976 25	292,684 53
1906-1907 (nine months).	215,449 55	....	39,763 63	494,117 12	11,349 89	5,449 06	420 00	69,536 31	1,089 51	379,476 32
1907-1908.	301,693 73	....	71,139 47	656,303 03	92,311 24	7,727 29	690 00	148,914 00	1,283 50	473,608 94

1908-1909	389,039 00	141,550 15	70,928 86	951,442 28	20,136 27	7,296 55	1,040 00	75,596 96	9,946 50	269,837 52
1909-1910	415,232 00	174,250 00	105,009 07	1,239,037 33	9,973 84	9,135 49	1,577 10	100,257 89	14,028 30	378,010 70
1910-1911	445,135 00	156,485 00	143,227 13	1,193,756 04	1,437 84	8,730 01	1,310 00	42,111 92	20,142 85	387,054 96
1911-1912	391,703 12	102,070 00	184,825 92	1,967,182 85	3,256 99	11,239 14	1,400 00	44,167 03	14,745 50	400,668 61
Total	4,532,381 89	781,096 16	783,978 24	11,190,077 16	3,813,791 63	112,370 55	15,286 10	1,564,507 23	282,275 19	5,985,344 14

STATEMENT showing Receipts on Account of Dominion Lands from July 1, 1872, to March 31, 1912—*Concluded.*

Fiscal Year.	Grazing Lands.		Hay, Coal, Mining, Stone Quarries, Export Tax on Gold, &c.		Canadian National Parks.	Colonization Lands.		Gross Revenue.	Refunds.	Net Revenue.
	Cash.	Scrip, &c.	Cash.	Scrip.		Cash.	Scrip.			
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
1872-73								26,239 45		26,239 45
1873-74								29,980 80		29,980 80
1874-75								27,641 15		27,641 15
1875-76								8,865 94		8,865 94
1876-77								140,755 02		140,755 02
1877-78								139,584 40		139,584 40
1878-79								234,732 93		234,732 93
1879-80								206,801 37	4,636 08	202,165 29
1880-81								206,990 54	5,038 22	201,952 32
1881-82	2,245 00		40 00			354,036 17		1,805,734 87	10,687 55	1,795,047 32
1882-83	22,844 43		913 91			248,492 01		1,051,403 60	8,746 05	1,042,657 55
1883-84	11,370 60		640 90			253,713 40		1,001,776 67	9,220 50	992,556 17
1884-85	17,089 75		815 63			1,214 22		451,564 65	12,070 85	439,493 80
1885-86	29,562 51	3,131 08	1,284 83					457,973 95	63,389 12	394,584 83
1886-87	14,242 77	39,487 67	1,570 40	80 00				588,532 80	19,543 16	568,989 64
1887-88	5,922 47	23,023 28	2,273 73	80 00	2,951 58		10,000 00	569,986 68	6,277 66	563,709 02
1888-89	2,207 69	16,802 63	3,946 55		2,528 73		16,000 00	594,088 04	5,226 23	588,861 81
1889-90	1,305 57	9,021 63	9,242 08		1,094 37			462,536 26	8,209 74	454.326 52
1890-91	3,079 55	16,193 77	8,628 44	160 00	2,397 35	5 28	4,460 50	460,990 76	7,195 27	453,795 49
1891-92	3,726 80	17,222 60	5,616 85		3,648 45			452,151 08	15,291 39	436,859 69
1892-93	6,380 80	11,542 39	6,266 13		4,983 23			392,324 43	18,314 97	374,009 46
1893-94	5,740 79	7,687 86	6.243 15		2,523 92			250,069 12	4,544 01	245,525 11
1894-95	5,353 72	8,628 00	5,229 54		2,321 87			202,983 10	4,365 99	198.617 11
1895-96	7,071 86	6,255 90	5,813 51		2,734 82			227,694 93	8,368 79	219,326 14
1896-97	4,715 01	2,500 00	8,518 18		2,132 11			206,853 57	15,010 54	191,843 03
1897-98	4,728 58	510 39	699,334 76		3,045 65			1,009,741 63	4,678 55	1,005.063 08
1898-99	5,245 88		1,130,371 60		2,994 16			1,584,328 32	32,296 39	1,552,031 93
1899-1900	8,382 86	4,083 30	1,038,195 42	20 00	2,727 60			1,503,743 00	23,062 28	1,480,680 72
1900-1901	4,726 28	14,671 99	1,101,808 33	20 00	4,047 31			1,874,159 09	18,368 85	1,855,790 24
1901-1902	7,292 46	8,409 27	737,878 43		*2,861 13			1,432,679 25	27,165 55	1,405,513 70
1902-1903	13,913 33	15,041 33	607,722 05		*5,063 69			1,890,886 83	21,519 84	1,869,366 99
1903-1904	19,790 27	15,202 15	495,579 18		*9,198 48			1,681,824 70	36,721 75	1,645,102 95
1904-1905	36,145 32	5,237 36	364,923 59		*14,059 55			1,339,382 35	25,786 90	1,313.595 45
1905-1906	51,583 89	80 00	296,769 19		18,883 83			1,709,315 28	33,418 36	1,675,896 92
1906-1907 (nine months)	43,711 91	400 00	213,852 59		*15,887 42			1,490,503 31	35,117 48	1,455,385 83
1907-1908*	43,211 78	4,048 01	266,415 31		27,232 87			2,094,579 17	115,080 04	1,979,499 13

1908-1909	53,312 79	3,257 84	252,972 17	....	31,321 20	....	....	2,277,678 09	102,463 78	2,175,214 31
1909-1910	67,434 29	5,081 47	460,154 29	....	43,264 36	....	....	3,022,446 13	121,431 15	2,901,014 98
1910-1911	60,702 80	2,356 00	774,569 27	....	69,054 59	....	....	3,306,073 41	198,689 47	3,107,383 94
1911-1912	69,519 41	1,520 00	729,240 42	....	56,497 74	....	....	3,978,036 73	197,631 35	3,780,405 38
Total	632,561 17	241,395 92	9,236,830 43	360 00	333,456 01	857,461 08	30,460 50	40,393,633 40	1,219,567 86	39,174,065 54

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* Including Scrip.

STATEMENT showing Yearly the Gross Revenue (in cash only) received from all Sources from July 1, 1892, to March 31, 1912.

Fiscal Year.	Dominion Lands.	School Lands.	Seed Grain.	Ordnance Lands.	Fines and Forfeitures.	Registration Fees.	Casual Revenue.	Chinese Immigration Revenue.	Total.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
1892-1893	303,550 86	82,615 22	5,866 21	33,776 90	777 00	10,750 38	1,331 96	....	438,668 53
1893-1894	214,540 30	47,574 11	2,339 16	22,318 20	864 15	10,358 02	1,982 04	....	299,975 98
1894-1895	171,085 48	47,665 10	2,752 56	22,645 97	693 85	9,811 77	875 36	....	255,530 09
1895-1896	174,509 38	56,584 32	8,748 05	17,550 28	502 00	8,737 87	1,920 66	....	268,552 56
1896-1897	187,424 19	24,292 43	9,887 13	9,831 27	1,316 00	8,997 24	2,683 05	....	244,431 31
1897-1898	980,313 10	52,410 82	12,351 71	22,537 17	529 06	14,263 50	260 92	....	1,082,666 28
1898-1899	1,563,020 74	41,249 77	12,388 69	12,349 65	2,801 03	19,220 73	2,620 91	....	1,653,651 52
1899-1900	1,410,883 48	220,874 78	15,271 84	11,043 53	1,452 92	21,751 90	3,664 00	....	1,684,942 45
1900-1901	1,533,197 07	48,049 83	15,711 63	14,604 47	1,977 93	33,979 77	1,587 57	....	1,649,108 30
1901-1902	1,254,333 56	193,410 75	20,293 06	16,967 36	1,955 61	50,854 99	3,900 62	....	1,541,715 95
	7,792,858 16	814,727 13	105,610 04	183,624 80	12,869 58	188,726 17	20,827 09	....	9,119,242 97
1902-1903	1,716,597 20	392,206 93	28,789 97	17,612 79	5,220 88	81,404 18	2,230 26	....	2,244,062 21
1903-1904	1,478,106 33	233,769 62	26,122 30	30,494 34	5,911 92	109,233 73	3,402 94	....	1,887,041 18
1904-1905	1,314,485 40	332,914 48	16,471 34	10,346 90	10,018 49	123,082 86	4,258 14	....	1,811,577 61
1905-1906	1,701,580 71	608,960 79	12,577 29	10,893 17	3,304 77	180,310 73	8,496 09	....	2,526,123 55
1906-1907 (9 months)	1,478,749 51	724,353 73	10,850 06	6,663 90	21 00	46,124 20	11,785 81	....	2,278,548 21
1907-1908	1,998,219 92	708,045 83	12,899 84	8,674 95	1,650 00	2,256 65	20,069 03	....	2,751,816 22
1908-1909	2,254,283 98	687,422 74	53,590 86	205,749 96	281 00	1,352 13	26,224 29	....	3,228,904 96
1909-1910	3,007,390 82	1,292,259 95	175,152 72	189,902 48	211 00	1,471 49	42,625 96	....	4,709,014 42
1910-1911	3,302,279 57	1,614,733 93	153,351 14	6,009 34	4,052 22	1,378 19	11,336 06	....	5,093,140 45
1911-1912	3,973,259 74	1,594,533 96	119,634 13	11,566 46	10,510 48	1,066 05	32,824 65	971,339 00	6,714,734 47
	22,224,953 18	8,189,201 96	609,439 65	497,914 29	41,181 76	547,680 21	163,253 23	971,339 00	33,244,963 28
Increases	14,432,095 02	7,374,474 83	503,829 61	314,289 49	28,312 18	358,954 04	142,426 14	971,339 00	24,125,720 31

NOTE.—Chinese Immigration Revenue reported by the Trade and Commerce Department prior to October 2, 1911.

STATEMENT of Revenue collected within the Canadian National Parks for the Fiscal Year ended March 31, 1912, as compared with Revenue for previous year.

Particulars.	Fiscal Year.		Increase.	Decrease.	Net Decrease.
	1911-12.	1910-11.			
	$ cts.	$ cts	$ cts.	$ cts.	$ cts.
Banff Park.					
Rent	8,596 28	8,918 12		321 84	
Timber Dues	1,720 94	1,102 90	618 04		
Water Rates (Sulphur)	879 56	1,779 51		899 95	
Cold Water Rates	3,983 52	4,667 69		684 17	
Sewer Rates	1,266 04	1,210 82	55 22		
Transfer Fees	108 00	96 00	12 00		
Cave and Basin Bathing tickets	4,049 25	3,567 50	471 75		
Quarry Permits	352 58	488 44		135 86	
Livery Licenses	650 25	683 00		32 75	
Pool, Billiard and Bowling Licenses	240 00	190 00	50 00		
Boat Licenses	131 50	137 50		6 00	
Butcher Licenses	80 00	80 00			
Coal Lands	22,584 11	34,559 07		11,974 96	
Grazing Lands	578 04	592 85		14 81	
Hot Springs Bathing tickets	4,808 75	4,148 75	660 00		
Telephone Rent	1,230 14	1,232 29		2 15	
Fines	156 00	566 05		410 05	
Peddlers' Licenses	40 00	92 00		52 00	
Camping Permits	34 00	18 00	16 00		
Guides' Licenses	70 00	75 00		5 00	
Restaurant Licenses	20 00	30 00		10 00	
Cemetery Lots	29 00	40 00		11 00	
Tea Room Licenses	90 00	50 00	40 00		
Sales of Town Lots		64 00		64 00	
Hay Dues	4 50	62 50		58 00	
Miscellaneous	315 67	1,061 59		745 92	
Sand	9 50		9 50		
	52,027 63	65,513 58	1,932 51	15,418 46	
Jasper Park.					
Timber Dues	2,205 10	1,731 69	473 41		
Rent	262 50	251 00	11 50		
Building Permits	55 25	355 00		299 75	
Boat Licenses	913 00	30 00	883 00		
Hay Dues		118 50		118 50	
Store Licenses		10 00		10 00	
Peddlers' Licenses	21 00	20 00	1 00		
Butchers' Licenses		10 00		10 00	
Restaurant Licenses	20 00	70 00		50 00	
Grazing Lands	5 00	5 00			
Guides' Licenses	10 00		10 00		
Camping Permits	1 00		1 00		
	3,492 85	2,601 19	1,379 91	488 25	
Yoho Park.					
Timber Dues	5 90	258 10		252 20	
Rentals	346 18	472 25		126 07	
Grazing Lands		12 75		12 75	
Transfer Fees	4 00		4 00		
Stone Quarries	135 00		135 00		
	491 08	743 10	139 00	391 02	
Waterton Lakes Park.					
Boat Licenses	30 50	10 00	20 50		
Rent	220 00	32 87	187 13		
Camping Permits	5 00	25 00		20 00	
Hay Dues		38 10		38 10	
Timber Dues	9 18	75	8 43		
Restaurant Licenses	20 00		20 00		
	284 68	106 72	236 06	58 10	

STATEMENT of Revenue collected within the Canadian National Parks, &c.—*Con.*

——	Fiscal Year.		Increase.	Decrease.	Net Decrease.
	1911-12.	1910-11.			
Buffalo Park.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Hay Dues	....	20 00	....	20 00	
Miscellaneous	158 32	60 00	98 32		
	158 32	80 00	98 32	20 00	
Elk Island Park.					
Timber Dues	1 50	....	1 50		
Miscellaneous	41 68	10 00	31 68		
	43 18	10 00	33 18		
Total	56,497 74	69,054 59	3,818 98	16,375 83	12,556 85

Comparative statement of the homestead entries and sales made during the Fiscal Years ending March 31, 1911, and March 31, 1912, respectively:—

——	Fiscal Year ending March 31, 1911.		Fiscal Year ending March 31, 1912.	
	No. of Entries.	Acres.	No. of Entries.	Acres.
Homesteads	44,479	7,166,640	39,151	6,264,160
Sales	....	443,673	1,070	52,517

STATEMENT showing the number of homestead entries reported in each year since 1874:—

Departmental Year ended	No. of Entries.	Departmental Year ended	No. of Entries.
October 31, 1874	1,376	October 31, 1894	3,209
" 31, 1875	499	December 31, 1895	2,394
" 31, 1876	347	" 31, 1896	1,857
" 31, 1877	845	" 31, 1897	2,384
" 31, 1878	1,788	" 31, 1898	4,848
" 31, 1879	4,068	" 31, 1899	6,689
" 31, 1880	2,074	June 30, 1900	7,426
" 31, 1881	2,753	" 30, 1901	8,167
" 31, 1882	7,483	" 30, 1902	14,673
" 31, 1883	6,063	" 30, 1903	31,383
" 31, 1884	3,753	" 30, 1904	26,073
" 31, 1885	1,858	" 30, 1905	30,819
" 31, 1886	2,657	" 30, 1906	41,869
" 31, 1887	2,036	Nine months ended March 31, 1907	21,647
" 31, 1888	2,655	Year ended March 31, 1908	30,424
" 31, 1889	4,416	" " 1909	39,081
" 31, 1890	2,955	" " 1910	41,568
" 31, 1891	3,523	" " 1911	44,479
" 31, 1892	4,840	" " 1912	39,151
" 31, 1893	4,067		

STATEMENT showing the number of Homestead Entries made during the Fiscal Years ended March 31, 1911 and 1912, and the Nationality of the Homesteaders as reported by the several agencies of the Department in Manitoba, Saskatchewan, Alberta and British Columbia.

Nationalities.	No. of Entries, 1911.	No. of Entries, 1912.
Canadians from Ontario	4,438	3,152
" Quebec	1,101	951
" Nova Scotia	237	182
" New Brunswick	140	118
" Prince Edward Island	68	69
" Manitoba	1,495	998
" Saskatchewan	4,061	3,085
" Alberta	980	863
" British Columbia	136	123
Persons who had previous entry	1,834	2,132
Newfoundlanders	7	6
Canadians returned from the U.S.A	553	401
Americans	12,485	10,577
English	6,161	5,739
Scotch	1,291	1,041
Irish	492	476
French	376	437
Belgians	133	159
Swiss	74	80
Italians	68	45
Roumanians	175	141
Syrians	64	56
Germans	845	790
Austro-Hungarians	2,804	3,121
Hollanders	201	153
Danes (other than Icelanders)	206	201
Icelanders	96	69
Swedes	937	964
Norwegians	1,092	1,160
Russians	1,858	1,781
Mennonites	6	....
Jamaicans	....	1
Brazilians	....	1
Chinese	5	8
Japanese	3	6
Persians	9	3
Australians	10	13
New Zealanders	6	12
Greeks	13	3
Hindoos	4	11
Bulgarians	....	5
Servians	3	4
Turks	7	9
Algerians	1	....
Spaniards	2	....
Chilians	1	3
Mexicans	1	....
Egyptians	....	1
Madagascans	....	1
Total	44,479	39,151

Representing 107,884 souls in 1911.
" 91,372 " 1912.

STATEMENT showing the number of Homestead Entries made during the Fiscal Years ended March 31, 1911 and 1912, by persons coming from the various States and Territories of the American Union.

States.	No. of Entries, 1911.	No. of Entries, 1912.
Arizona	6	1
Alabama	11	....
Alaska	1	2
Arkansas	21	19
California	83	72
Carolina, North	29	10
Carolina, South	12	3
Colorado	16	47
Columbia, District of	....	2
Connecticut	25	13
Dakota, North	4,339	3,987
Dakota, South	782	615
Delaware	1	....
Florida	1	4
Georgia	6	9
Idaho	228	138
Illinois	409	169
Indiana	219	245
Indian Territory	....	88
Iowa	598	470
Kansas	200	139
Kentucky	50	49
Louisiana	4	4
Maine	51	20
Maryland	5	6
Massachusetts	93	91
Michigan	650	462
Minnesota	2,213	1,799
Mississippi	10	6
Missouri	147	119
Montana	246	209
Nebraska	200	204
Nevada	3	4
New Hampshire	29	22
New Jersey	16	17
New Mexico	1	7
New York	205	178
Ohio	183	169
Oklahoma	99	97
Oregon	157	105
Pennsylvania	126	136
Rhode Island	19	19
Tennessee	34	25
Texas	32	52
Utah	19	13
Vermont	24	23
Virginia	14	37
Virginia, West	12	6
Washington	683	452
Wisconsin	678	599
Wyoming	30	15
Total	13,038	10,978

STATEMENT showing the number of Letters Patent issued by the Department of the Interior for Dominion Lands since 1873 and the number of acres patented.

Period.	No. of Patents issued.	Acreage.
1873, May, 1873, to 31st December	420	67,200
1874, 1st January, 1874, to 31st December	577	92,320
1875, " 1875, to 31st October	464	74,240
1876, year ended 31st October	318	50,880
1877, " "	2,437	478,840
1878, " "	2,357	462,880
1879, " "	2,663	426,080
1880, " "	1,084	173,440
1881, " "	1,885	400,862
1882, " "	2,197	506,785
1883, " "	4,341	831,341
1884, " "	3,896	909,604
1885, " "	3,533	898,464
1886, " "	4,570	942,055
1887, " "	4,599	1,071,364
1888, " "	3,275	647,644
1889, " "	3,282	661,636
1890, " "	3,273	626,019
1891, " "	2,449	411,073
1892, " "	2,955	549,257
1893, " "	2,936	502,601
1894, " "	2,553	420,238
1894, November and December	413	66,102
1895, year ended 31st December	2,118	348,964
1896, " "	2,665	531,861
1897, " "	2,972	499,859
1898, " "	3,037	646,671
1899, " "	3,904	714,748
1900, 1st January, 1900, to 30th June	1,970	310,501
1901, year ended 30th June	6,491	6,846,857
1902, " "	8,768	4,711,104
1903, " "	7,349	3,266,388
1904, " "	6,890	2,982,579
1905, " "	8,798	6,197,354
1906, " "	12,370	4,181,345
1907, 1st July, 1906, to 31st March	10,596	2,361,330
1908, year ended 31st March	18,690	6,138,977
1909, " "	22,431	4,215,326
1910, " "	22,854	3,662,259
1911, " "	21,754	3,710,288
1912, " "	19,354	3,155,388
	239,458	65,752,724

STATEMENT showing number of Homestead Entries granted in the Provinces of Manitoba, Saskatchewan, Alberta and British Columbia for Fiscal Year 1911-12, as compared with Fiscal Year 1910-11.

Agencies.	1911-12.	1910-11.	Increase.	Decrease.	Total 1911-12.	Total 1910-11.	Increase 1911-12.	Decrease 1910-11.
MANITOBA.								
Winnipeg	2,095	1,994	101					
Dauphin	1,012	1,012						
Brandon	51			25				
	3,158	3,082	101	25	3,158	3,082	76	
SASKATCHEWAN.								
Yorkton	1,265	1,315		50				
Estevan	937	1,033		96				
Regina	341	435		94				
Humboldt	1,721	1,738		17				
Prince Albert	2,096	1,871	225					
Moosejaw	4,083	5,285		1,202				
Medicine Hat	1,137	1,589		452				
Battleford	2,484	2,215	269					
Swift Current	3,453	5,568		2,115				
Saskatoon	2,967	4,178		1,211				
	20,484	25,227	494	5,237	20,484	25,227		4,743
ALBERTA.								
Calgary	3,837	5,450		1,613				
Lethbridge	567	933		366				
Red Deer	1,731	2,032		301				
Edmonton	6,398	5,112	1,286					
Grande Prairie	492		492					
Peace River	452	291	161					
Medicine Hat	1,707	2,146	439					
	15,184	15,964	1,939	2,719	15,184	15,964		780
BRITISH COLUMBIA.								
Kamloops	287	202	85					
New Westminster	38	4	34					
	325	206	119		325	206	119	
Grand total for fiscal year ended 1911-12					39,151			
" " 1910-11						44,479		
Net decrease for fiscal year 1911-12					5,328	195	5,523	

CORRESPONDENCE.

The following statement shows the number of letters received and sent by the Department in each year since its establishment.

Departmental Year ended October 31.	Letters Received.	Letters Sent.	Total.
1874	3,482	4,120	7,632
1875	1,974	2,189	4,163
1876	2,256	3,097	5,353
1877	3,137	3,677	6,814
1878	4,642	6,009	10,651
1879	5,586	6,179	11,755
1880	8,222	9,910	18,162
1881	13,605	15,829	29,434
1882	25,500	30,300	55,800
1883	27,180	33,500	60 680
1884	27,525	33,386	60,911
1885	33,970	43,997	77,967
1886	60,964	67,973	128,937
1887	47,845	60,890	108,735
1888	43,407	52,298	95,705
1889	48,316	50,500	98,816
1890	36,200	36,008	72,208
1891	38,000	36,267	74,267
1892	41,990	42,203	84,193
1893	50,794	48,145	98,939
1894	48,619	50,840	99,459
1895	49,991	45,898	95,889
1896	47,501	44,238	91,739
1897	65,714	64,147	129,861
1898	88,913	87,845	176,758
1899	95,023	91,876	186,899
1900	121,219	133,177	254,396
1901	144,978	136,348	281,326
1902	167,200	185,548	352,748
1903 (From June 30, 1902, to July 1, 1903)	185,582	223,463	409.045
1904 (From June 30, 1903, to July 1, 1904)	222,316	274,675	496,991
1905 (From June 30, 1904, to July 1, 1905)	245,470	302,723	548,193
1906 (From June 30, 1905, to July 1, 1906)	407,794	529,465	937,259
1907 (From June 30, 1906, to April 1, 1907)	372,231	620,968	993,199
1908 (From March 31, 1907, to April 1, 1908)	543,647	1,106,772	1,650,419
1909 (From March 31, 1908, to April 1, 1909)	721,217	1,114,380	1,835,597
1910 (From March 31, 1909, to April 1, 1910)	935,217	1,174,546	2,109,763
1911 (From March 31, 1910, to April 1, 1911)	1,027,933	1,280,697	2,308,630
1912 (From March 31, 1911, to April 1, 1912)	1,224,316	1,304,904	2,529,220

The number of registered letters during the departmental year ending March 31, 1912, was: received. 21,309; sent, 27,202.

STATEMENT of Land Sales by Railway Companies having Government

Year.	Hudson's Bay Company.		Canadian Pacific Railway Company.		Manitoba South-western Colonization Railway Company.		Qu'Appelle, Long Lake and Saskatchewan Railroad and Steamboat Company.	
	Acres.	Amount.	Acres.	Amount.	Acres.	Amount.	Acres.	Amount.
		$		$		$		$
1893	....	....	93,184	295,288	14,164	57,559	1,603	....
1894	7,526	48,225	43,155	131,628	6,312	28,003	640	....
1895	4,431	23,209	55,453	176,950	5,623	22,330	2,391	....
1896	9,299	52,410	66,624	220,360	21,254	88,568	286	....
1897	10,784	53,277	135,681	431,095	63,800	234,644	2,524	....
1898	62,000	310,000	242,135	757,792	106,473	363,982	22,534	....
1899	56,875	274,625	261,832	814,857	58,019	199,458	61,030	178,517
(Fiscal Year) 1900	70,196	352,631	379,091	1,152,836	133,507	437,449	18,932	53,974
(Fiscal Year) 1901	82,308	399,804	339,985	1,046,665	59,749	214,953	22,266	74,810
(Fiscal Year) 1902	269,577	1,112,332	1,362,478	4,440,500	206,411	713,365	39,835	147,365
(Fiscal Year) 1903	330,046	1,939,804	2,260,722	8,472,250	250,372	699,210	843,900	1,476,900
(Fiscal Year) 1904	144,857	879,910	857,474	3,516,864	29,522	113,303	....	....
(Fiscal Year) 1905	139,721	865,905	411,451	2,045,800	80,342	296,936	....	....
(Fiscal Year) 1906	236,191	1,863,375	1,012,322	6,015,060	83,418	360,889	....	....
(9 months to March 31, 1907)	69,158	742,221	851,083	4,817,632	3,051	22,645	1,353	16,789
(Fiscal Year) 1908	21,184	267,215	81,060	727,367	31,982	153,007	5,621	68,869
(Fiscal Year) 1909	25,449	288,836	29,331	383,390	10,396	84,845	37,662	380,371
(Fiscal Year) 1910	104,382	1,297,454	655,585	10,473,425	14,501	126,950	106,000	964,600
(Fiscal Year) 1911	267,038	3,747,768	715,095	10,372,661	20,313	284,859	113,533	1,237,204
(Fiscal Year) 1912	42,554	808,943	855,280	12,420,488	18,932	117,497	35,213	495,116
Total	1,953,576	15,627,944	10,709,021	68,712,908	1,218,141	4,620,452	1,315,323	5,094,515

Land Grants and by the Hudson's Bay Company.

Calgary and Edmonton Railway Company.		Canadian Northern Railway Company.		Great Northwest Central Railway Company.		Totals.		Average per Acre.
Acres.	Amount.	Acres.	Amount.	Acres.	Amount.	Acres.	Amount.	
	$		$		$		$	$ cts.
11,260	....	....	....	....	....	120,211	352,847	2 93
11,035	....	....	....	....	....	68,668	207,856	3 02
46,815	....	....	....	....	....	114,713	222,489	1 94
10,553	....	....	....	....	....	108,016	361,338	3 34
9,436	....	....	....	....	....	222,225	719,016	3 23
15,481	....	....	....	....	....	448,623	1,431,774	3 18
24,738	53,335	....	....	....	....	462,494	1,520,792	3 28
46,653	128,256	....	....	....	....	648,379	2,125,146	3 27
116,719	352,637	....	....	....	....	621,027	2,088,269	3 36
323,494	1,033,396	....	....	....	....	2,201,795	7,746,958	3 56
231,800	909,600	183,736	631,503	128,435	522,490	4,229,011	14,651,757	3 46
129,007	563,507	64,469	313,575	41,858	177,081	1,267,187	5,564,240	4 39
109,191	512,898	231,707	1,221,469	17,593	103,564	990,005	5,046,572	5 09
85,784	480,063	204,966	1,014,351	20,003	137,503	1,642,684	9,871,241	6 01
59,515	346,064	289,576	1,711,109	4,023	41,470	1,277,759	7,697,930	6 02
8,606	75,644	196,946	1,746,504	1,294	13,855	346,693	3,052,461	8 80
6,370	66,508	*	*	165	7,935	109,273	1,211,885	11 08
18,323	182,926	285,428	2,783,010	571	6,863	1,184,790	15,835,228	13 36
11,820	116,231	277,414	3,336,797	1,438	27,417	1,406,651	19,122,937	13 59
10,853	154,424	365,926	4,216,578	632	11,373	1,329,390	18,224,419	13 70
1,287,453	4,974,889	2,100,168	16,974,896	216,012	1,049,551	18,799,694	117,055,155	6 23

THE LAND SITUATION OF MANITOBA, SASKATCHEWAN AND ALBERTA.

Total land area Manitoba	147,152,880	acres (approx.)
" Saskatchewan	143,927,680	"
" Alberta	150,117,760	"
Grand total	441,198,320	"

SURVEYED AREA.

Total surveyed area .... 178,811,768 acres.

Area Available for Cultivation.

—	Manitoba.	Saskatchewan.	Alberta.	Total.
	Acres.	Acres.	Acres.	Acres.
Area in surveyed section (all water covered land deducted)	25,892,630	67,731,270	56,163,947	149,787,847
Area of Parishes and River lot settlements	486,311	81,974	96,603	664,888
Area of Indian reserves (including 6,683 acres north of surveyed area in Saskatchewan and 93,856 acres in Northern Alberta	337,887	1,140,286	1,244,518	2,722,691
Area of Indian reserves surrendered	55,423	263,623	257,735	576,781
Total				153,752,207

Area not Available for Cultivation.

—	Manitoba.	Saskatchewan.	Alberta.	Total.
	Acres.	Acres.	Acres.	Acres.
Area of water covered lands in surveyed sections	3,283,357	1,689,396	1,722,690	6,695,443
Area of road allowances	908,882	1,407,020	1,073,054	3,388,956
Area of Forest reserves	2,494,240	599,642	11,881,280	14,975,162
Total				25,059,561

Disposition of Surveyed Sections.

—	Manitoba.	Saskatchewan.	Alberta.	Total.
	Acres.	Acres.	Acres.	Acres.
Area under Homestead, South African Volunteers' homestead, pre-emption and purchased homestead entry, Northwest half-breed scrip, Military scrip sales and special grants	13,020,770	32,649,275	22,682,807	68,352,852
Area granted to Railway companies on account of land subsidies (chiefly odd numbered sections)	3,566,997	15,177,063	13,120,014	31,864,074
Area granted to Hudson's Bay Company (unsurveyed area not included)	1,613,134	3,787,764	2,637,782	8,038,680
Area of school land endowment (unsurveyed area not included)	1,438,479	3,762,848	3,120,219	8,321,546
Area sold under irrigation system		69,200	973,685	1,042,885
Area of Manitoba swamp lands (selected under "Better terms" Act of 1885)	2,542,850			2,542,850
Grand total				120,162,887

AREA UNDER CROP 1911.

—	Manitoba.	Saskatchewan.	Alberta.	Totals.
	Acres.	Acres.	Acres.	Acres.
Area under wheat..	2,979,734	4,704,660	1,616,899	9,301,293
" oats	1,260,736	2,124,057	1,178,410	4,563,203
" barley	433,067	172,253	156,418	761,738
" flax.	77,789	950,049	93,662	1,121,500
" other products	180,706	55,402	231,617	467,725
Totals	4,932,032	8,006,421	3,277,006	16,215,459

UNSURVEYED AREA IN MANITOBA, SASKATCHEWAN AND ALBERTA.

As to the remaining land area unsurveyed, a large proportion has not yet been explored, except in a very partial way, but from what is now known generally of the character of this land the area available for some forms of agriculture, though of much less average value than the lands surveyed at this date, might be given as follows:—

	Acres.
Manitoba	19,000,000
Saskatchewan	16,000,000
Alberta	56,000,000
Total area	91,000,000

If this net total were cut in half the result would represent very conservatively, an area of farming land of good quality and fairly equal in productiveness to the settled area of . . . . 45,500,000 acres;

add surveyed area available for cultivation . . . . 153,752,207 acres;

grand total available for cultivation . . . . 199,252,207 acres.

Thus it will be evident from the foregoing table of areas under crop for 1911, that only about 8% of the available land in the three Prairie Provinces is yet under cultivation.

GRAIN PRODUCTION IN BUSHELS OF THE THREE PRAIRIE PROVINCES FOR 1911.

—	Wheat.	Oats.	Barley.	Flax.
Manitoba	60,275,000	57,893,000	14,447,000	1,123,000
Saskatchewan	97,665,000	97,962,000	5,445,000	10,688 000
Alberta	36,143,000	56,964,000	4,151,000	975,000
Totals	194,083,000	212,819,000	24,043,000	12,784,000

Statistics as to Elevator Capacities in Bushels by Provinces.

Fiscal Year.	Manitoba.	Saskatchewan.	—	Alberta.	Totals.
1900-01	10,323,272		N.W.T. 2,436,080		12,759,352
1901-02	12,255,000		〃 3,194,000		15,449,000
1902-03	16,121,400		〃 5,105,000		21,226,400
1903-04	19,297,000		〃 7,917,000		27,214,000
1904-05	19,557,630		〃 8,934,000		28,491,630
1905-06	20,656,100	8,951,600		1,715,500	31,323,200
1906-07	20,502,200	12,989,500		2,785,500	36,277,200
1907-08	21,015,600	14,666,500		3,818,900	39,501,000
1908-09	20,558,500	17,924,500		4,386,400	42,869,400
1909-10	21,624,500	24,314,500		8,080,400	54,019,400
1910-11	21,813,800	26,465,000		8,764,500	57,043,300
1911-12	22,410,500	29,314,000		9,863,000	61,587,500

WHEAT.

A very interesting side-light is thrown on the development of the wheat production of the west by a glance at some figures taken from the report of the Department of the Interior for the year 1891. For that year the total wheat production for what are now the three prairie provinces, was stated to be 30 million bushels.

For the season of 1911, twenty years later, the total wheat production in this territory was 194 million bushels, over six times as much. The production of Manitoba has more than doubled in this time, while that of Saskatchewan and Alberta together has become over 19 times as great.

Statistics as to Railway Mileage by Provinces.

Year.	Manitoba.	Saskatchewan.	Alberta.	Totals.
1901	2,056	1,107	978	4,141
1902	2,128	1,102	978	4,208
1903	2,224	1,117	978	4,319
1904	2,364	1,180	1,020	4,564
1905	2,672	1,523	1,020	5,215
1906	2,823	1,973	1,200	5,996
1907	3,074	2,025	1,323	6,422
1908	3,110	2,081	1,323	6,514
1909	3,205	2,630	1,323	7,158
1910	3,526	3,350	1,774	8,650
1911	3,678	3,536	1,895	9,109

RAILWAYS IN MANITOBA, SASKATCHEWAN AND ALBERTA IN 1911.

Railways.	Manitoba.	Saskatchewan.	Alberta.	Totals.
Canadian Pacific Railway	1,558	1,800	1,273	4,631
Canadian Northern Railway	1,747	1.321	221	3,289
Grand Trunk Pacific Railway	212	415	401	1,028
Great Northern Railway	161	....	....	161
Totals	3,678	3,536	1,895	9,109

The commercial development of the work is indicated by the following table:—

BRANCHES OF CANADIAN CHARTERED BANKS BY PROVINCES.

Fiscal Year.	Manitoba.	Saskatchewan.	—	Alberta.	Totals.
1901	52	....	N.W.T. 19	....	71
1902	53	....	" 23	....	76
1903	64	....	" 42	....	106
1904	86	....	" 74	....	160
1905	90	39	....	41	170
1906	104	48	....	49	201
1907	146	91	....	77	314
1908	161	116	....	89	366
1909	164	131	....	97	392
1910	171	187	....	140	498
1911	192	320	....	220	732

PEACE RIVER DISTRICT.

The Peace River District containing an approximate area of 87,850 square miles lying northwest of Edmonton, 5,470 of which are in the province of British Columbia, may be described as a level to undulating plateau, with large areas of prairie land interspersed with groves of cottonwood or aspen.

The soil is chiefly a deep rich clay loam. At the World's Columbian Exposition of 1893, wheat grown in this district was awarded first prize. An experimental farm established two years ago is in operation at Fort Vermilion.

For land administration purposes the district is divided into two Dominion Land Agencies, namely: Peace River and Grande Prairie, with offices at Grouard and Grande Prairie. The country around Lesser Slave Lake, Bear Lake, Pouce Coupe and Dunvegan is rapidly filling up.

The Peace River, which, with three obstructions, is navigable for steamboats for about 863 miles, contains a trough-like valley throughout the district varying from 500 to 1,000 feet in depth and from 1 to 3 miles in width. The principal tributaries of the Peace are the Red, Loon, Smoky and North and South Pine rivers. Several transportation companies have boats in operation in the district.

IMMIGRATION.

The Report of the Superintendent of Immigration will be found in Part II of the General Report. A Supplementary Report is also made by the Superintendent this year in his capacity as Chief Controller of Chinese Immigration, which office he assumed on the 2nd October, 1911, in pursuance of an Order in Council passed on the 31st May, 1911, and his subsequent appointment by a further order, dated the 4th August, 1911. Some interesting statistics relating to Chinese immigration will be found in the report referred to.

The following is a comparative statement of immigrant arrivals, apart from Chinese, at inland and ocean ports, from 1897 onward:—

Year.	Great Britain and Ireland.	Other Countries except United States.	United States.	Totals.
1897	11,383	7,921	2,412	21,716
1898	11,173	11,608	9,119	31,900
1899	10,660	21,938	11,945	44,543
1900 (6 months)	5,141	10,211	8,543	23,895
1900-1	11,810	19,352	17,987	49,149
1901-2	17,259	23,732	26,388	67,379
1902-3	41,792	37,099	49,473	128,364
1903-4	50,374	34,786	45,171	130,331
1904-5	65,359	37,364	43,543	146,266
1905-6	86,796	44,472	57,796	189,064
1906-7 (nine months ended March 31).	55,791	34,217	34,659	124,667
1907-8	120,182	83,975	58,312	262,469
1908-9	52,901	34,175	59,832	146,908
1909-10	59,790	45,206	103,798	208,794
1910-11	123,013	66,620	121,451	311,084
1911-12	138,121	82,406	133,710	354,237
	861,545	595,082	784,139	2,240,766

BRITISH IMMIGRATION.

I had the pleasure last year of drawing attention to a greatly increased immigration from the British Isles. The number of immigrants arriving from Great Britain and Ireland in 1909-10 was 59,790; in 1910-11 the number was 123,013, and I am glad that we are able to record a still further increase of arrivals in 1911-12, the period covered by the present report. During this year 138,121 British immigrants have arrived, declaring their intention of settling in Canada. In last year's report allusion was also made to the increased stringency of the immigration regulations, and it may be remarked that this stringency has not had the effect of lessening the number of immigrants, but there can be no doubt that it has stimulated the movement to Canada of really desirable people, who evidently regard emigration to this country with all the more favour when they find that we are inclined to admit none but high-class immigrants, people who are physically and mentally sound and otherwise qualified to succeed in Canada.

CONTINENTAL IMMIGRATION.

An increase also is shown in the number of immigrant arrivals from overseas. The number for 1910-11 was 66,620, and for 1911-12 the records show 82,406.

This yearly increasing flow of immigration from Continental Europe speaks well for the effectiveness of our advertising propaganda on the Continent. in spite of the many difficulties placed in our way there.

About one-third of the continental immigrants entered for homesteads in Western Canada during the year, many others purchasing lands from corporations or private owners and others engaging as farm labourers or in domestic service.

AMERICAN IMMIGRATION.

It will be seen that the immigration from the United States has continued to increase. The number of new arrivals for last year was 121,451; this year it was 133,710. It will be seen from this that our agents in the United States are keeping up. and, indeed. extending their good work for Canada. The immigrants we get from the United States are practically all farmers and farm labourers. drawn for the most part from the farming communities of the Western States.

JUVENILE IMMIGRATION.

The general supervision of child immigration falls within the province of the Chief Inspector of British Immigrant Children and Receiving Homes, whose report. which appears as part of the superintendent's report, will, no doubt, be read with special interest.

SURVEYS.

Seventy-six survey parties, each in charge of a Dominion Land Surveyor. were employed; the total number of men on these parties was somewhere in the neighbourhood of twelve hundred. Forty-two of these parties were paid by the day; thirty-four worked under contract at rates per mile fixed by Order in Council.

Ten of the parties paid by the day were engaged in establishing the initial meridians and base lines which are the governing lines of the Dominion Lands System of Survey and must be marked on the ground before the subdivision of any part of the country for settlement can be proceeded with. There is now a demand for land in widely scattered localities; the subdivision of these localities requires the extension of the base lines and meridians over an enormous extent of country. Eight hundred and sixty-five miles of these lines were surveyed. The other daily paid parties were engaged in restoring obliterated surveys and doing work of a miscellaneous character not suitable for execution under contract. Settlements were laid out at several points on the Athabaska river, in order to enable the squatters to acquire title to their lands without too much delay. The subdivision of their lands into townships and sections could not have been proceeded with for several years because the base lines were not ready. A topographical survey of the valley of Fiddle Creek, Jasper Park, between the Hot Springs and the Grand Trunk Pacific railway, was made for the purpose of laying out roads, town-sites and a system of water distribution.

The contractors subdivided one hundred and sixty-five whole townships and eight fractional townships, while a partial subdivision was made of three hundred and thirty others, and a resurvey either partial or complete of two hundred and twenty-five others. This represents 5,146,080 acres of original subdivision and 1,127,360 of surveys other than original subdivision. The new townships are mostly in Northern Manitoba, Saskatchewan north of Battleford, and in Alberta along the line of the Grand Trunk Pacific and in the Peace River District.

Over seventeen thousand miles of lines were surveyed. When the surveyors' field notes are received, each mile has to be carefully scrutinized in order to make sure that the survey has been properly executed and that there is no mistake or error in the measurements. The plans of the surveys have next to be plotted and printed for the use of the administration and of the public. A staff of one hundred and twenty-seven men, mostly men of high technical qualifications, is engaged upon this work. Over six hundred and fifty plans and eighty-six maps were issued and printed in the lithographic office of the surveys.

A staff of seventy-six survey parties, many of them consisting of several surveyors and pupils, requires a large instrumental equipment. It is estimated that there are in use on the Survey of the Dominion Lands no less than two hundred transit theodolites, one hundred sidereal watches, and a proportional number of clinometers, aneroids, steel tapes, &c. The perfection of the surveys depends upon the quality and proper adjustment of the surveyors' instruments; this is now provided for at the Surveys Laboratory, where all instruments are carefully examined, tested and adjusted before issue to the surveyors. The laboratory equipment consists of one vertical and three horizontal collimators, all with micrometer eye-pieces, a level trier, a standard barometer, an aneroid testing apparatus, a micrometer microscope, a sidereal clock and chronograph and four temperature boxes for testing watches. The laboratory is further provided with the necessary facilities for astronomical work so that the surveyors may acquire the practice of the observations necessary for their surveys. The laboratory has already proved extremely useful; it is expected that it will have a most beneficial influence on the surveys.

Following are the usual tables showing the distribution of parties last year and the subdivision or settlement survey work completed each year since the inception of the surveys, with the result of last season's operations added:

Period.	Acres.	Number of Farms of 160 acres each.
Previous to June, 1873	4,792,292	29,952
1874	4,237,864	26,487
1875	665,000	4,156
1876	420,507	2,628
1877	231,691	1,448
1878	306,936	1,918
1879	1,130,482	7,066
1880	4,472,000	27,950
1881	8,147,000	50,919
1882	10,186,000	63,662
1883	27,234,000	170,212
1884	6,435,000	40,218
1885	391,680	2,448
1886	1,379,010	8,620
1887	643,710	4,023
1888	1,131,840	7,074
1889	516,968	3,231
1890	817,075	5,106
1891	76,560	476
1892	1,395,200	8,720
1893	2,928,640	18,304
1894	300,240	1,876
1895	406,240	2,539
1896	506,560	3,166
1897	428,640	2,679
1898	859,840	5,374
1899	1,022,720	6,392
1900 (first 6 months)	735,480	4,596
1900–1901	1,603,680	10,023
1901–1902	2,553,120	15,957
1902–1903	6,173,440	38,584
1903–1904	12,709,600	79,435
1904–1905	10,671,520	66,697
1905–1906	4,973,920	31,087
1906–1907 (9 months)	3,819,700	23,873
1907–1908	6,123,040	38,269
1908–1909	7,412,870	46,330
1909–1910	7,423,200	46,395
1910–1911	5,683,200	35,520
1911–1912	5,146,080	32,163
	156,092,545	975,573

The parties were distributed by provinces as follows:—

—	In Manitoba.	In Saskatchewan.	In Alberta.	In British Columbia.	Partly in one province and partly in another	Total.
Paid by the day	3	3	12	6	15	39
Under contract	3	16	13	....	2	34
Parties engaged for a short time only	1	....	....	1	1	3
	7	19	25	7	18	76

BOARD OF EXAMINERS FOR DOMINION LAND SURVEYORS.

The Board of Examiners for Dominion Land Surveyors met in February and May, examinations being held at Ottawa, Montreal, Kingston, Toronto, Winnipeg, Regina, Calgary, Edmonton and Vancouver. Out of 268 candidates, fifty-seven received certificates of preliminary examination and forty-eight were granted commissions as Dominion Land Surveyors.

RECIPROCITY AMONG SURVEYORS.

At the Colonial Conference in 1907, a motion was submitted by the Government of New Zealand for the purpose of establishing reciprocity among land surveyors throughout the Empire. Reciprocity had already been secured between New Zealand and the several states of Australia; the proposal was to extend this arrangement to the other parts of the Empire. The motion was discussed at the Conference and a resolution was adopted favouring reciprocity and commending it to the consideration of the several governments.

In order to devise means for carrying out the desire expressed by the resolution, the Dominion, Commonwealth, State and Provincial Governments were invited by His Majesty's Government to send representatives to a conference of the Surveyors General of the Colonies to be held in London. This invitation was duly communicated to the Provincial Governments in Canada: all replied that they did not propose sending delegates. A like answer was received by the Imperial Government from Newfoundland and the Union of South Africa. The Surveyor General of Dominion Lands was authorized to represent Canada. The Conference was held in May and June, 1911, the delegates present being the Surveyor General of Dominion Lands, representing Canada, and Messrs. E. A. Counsel, Surveyor General of Tasmania, and Allan Spowers, Surveyor General of Queensland, representing New Zealand, the Commonwealth of Australia and the Australian States with the exception of South Australia. Delegates from the Ordnance Survey, the Institution of Civil Engineers and the Surveyors' Institution represented the United Kingdom, Colonel Sir Duncan Johnston, late director of the Ordnance Survey, being elected Chairman. Right Hon. Sir George Reid, High Commissioner for Australia, took part in the proceedings on behalf of his government.

At the first session, the Surveyor General of Dominion Lands submitted a synopsis of conditions in Canada, pointing out that in each province the local surveyors were incorporated and the surveyors from the other provinces rigidly excluded. As it had not yet been possible to establish reciprocity among the several provinces of the Dominion, there was little prospect of the adoption by Canada of the wider scheme of reciprocity throughout the Empire.

The Conference prepared a syllabus for the examination of candidates and advised the formation of a Central Board for supervising the details of the scheme. Their report concludes as follows:—

> 'The free discussion which has taken place at the Conference does not permit the delegates to overlook the difficulties which undoubtedly exist in the way of a general agreement for reciprocity; and although they are conscious that the scheme they have formulated will not provide a complete answer to every objection which can be raised, they venture to submit it as offering a groundwork for a future agreement among the Dominions, Provinces or States who desire to enter

into reciprocal arrangements. Should any governments not find it practicable to accept in its entirety, the scheme herein submitted, it may be that they will be able to adopt such parts of it as their circumstances permit. Even if a part only of the examinations for qualifying as surveyors should be accepted throughout the Empire, so that a candidate who had passed that part of the examination in any portion of the Empire would be excused having to undergo it again, in order to qualify as a surveyor in another portion of the Empire, a step forward would be made.'

ASTRONOMICAL BRANCH, INCLUDING THE INTERNATIONAL BOUNDARY AND GEODETIC SURVEYS.

The work of the Observatory has followed the same general lines as in previous years.

In the Astrophysical Division, the principal work has been, as before, the determination of the orbits of spectroscopic binary stars. The elements of the orbits of six binaries have been completed during the year. During the year 715 stellar spectra were secured, about 130 less than in the previous year. This decrease is in great part due to the fact that fainter stars have to be observed, requiring longer exposure times.

The spectrographs have remained practically unchanged, no improvements having suggested themselves. A five inch plane grating ruled by Dr. J. A. Anderson, of Johns Hopkins University, was obtained about the new year, which gives great concentration of light in the first order at one side, over 50% of the light incident upon the grating being diffracted into this order. A spectrograph has been designed, and is now being constructed in the Observatory, to enable this grating to be used in stellar spectroscopy, and it is hoped that valuable results may be obtained.

The work on the solar rotation which, as stated in the last report, was definitely arranged for at the Mt. Wilson meeting of the International Union for Co-operation in Solar Research in 1910, has been actively prosecuted during the year. The rotational values are about 2% lower than those obtained by Adams in 1906-7 and 1908, but whether this is due to a real change in the rate or to some instrumental or personal cause is not yet determinable. It may be stated that some very curious and unexplainable differences in measures of the same plates by different observers have appeared, some of which are of greater magnitude than the above difference. The law of decrease of the velocity of rotation with increase of solar latitude is of practically the same form as determined previously. Possibly the most important result obtained has been to show, by the discussion of very large numbers of residuals, that, so far as these measures are concerned, there are no systematic differences in the velocity obtained from lines of different elements. It is proposed to continue this work during the coming summer.

The two azimuth marks are now in use in transit circle work. Permanent houses to protect the piers and marks are to be erected shortly. An examination of the changes of azimuth and of level during the last two years has shown these to be very small and the stability of the pier and transit to be very satisfactory. The mounting of the circle microscopes is not sufficiently rigid, so that a change to the form of mounting used on the Repsold circles is contemplated.

Observations of right ascension have been carried on continuously so far as possible since March, 1910; in that year 5,371 and in 1911, 2,522 transits were observed. This year there are a sufficient number of observers to admit of observing from evening until morning. The reduction of the 1910 observations is about completed and the deduced right ascensions ready for publication. There were 2,428 zenith distances observed last year, including many stars whose declinations are required for our latitude determinations.

A rigid investigation of pivot errors has been made this year and the results computed and tabulated.

The chief advance in the Observatory Time Service has been the installation of the Magneta clock system in the Victoria Museum, which is much superior to that employing batteries. As the Master clock is self-winding and there are no batteries or contact points very little attention is required.

During the past calendar year the two Bosch photographic pendulums have recorded seventy-five earthquakes in various parts of the world, and 18 bulletins have been issued to 61 stations.

From the observatory have been issued stereographic projection tables computed for the more important stations of the world for facilitating the location of earthquake epicentres, and the method based thereon has found very general use and acceptance.

Dr. Klotz represented Canada at the International Seismological Conference in Manchester, England, last July. Besides presenting several papers he succeeded in having adopted a uniform nomenclature and form of bulletin for earthquakes, which was badly lacking heretofore.

The study of microseisms and their relationship to the action of waves on the sea-shore, consequent to areas of low barometer on the ocean, is being continued.

The magnetic survey of Canada occupied the territory west of Winnipeg to the Rocky Mountains and northward to the north branch of the Saskatchewan. In all 60 stations were occupied at each of which the three elements, declination, inclination and intensity were determined.

To the magnetic equipment was added a Toepfer Earth Inductor, used for standardizing dip circles.

At five stations in British Columbia, Prince Rupert, Hazelton, Atlin, Revelstoke and Field, the latitude and longitude were astronomically determined and at two of these, Hazelton and Atlin, permanent meridian marks were placed.

The surveys along the various sections of the International Boundary line have been continued as heretofore. The 141st meridian of west longitude, which forms the boundary between Yukon Territory and Alaska, was projected to a point about ten miles from the Arctic Ocean, and good progress was made with the final monumenting and with the triangulation and topography of the adjacent country. It is expected that the survey will be completed to the Arctic Ocean during the coming summer. There will then remain about ninety miles of the meridian to be surveyed between Natazhat Ridge and Mount St. Elias. This is a very difficult region, being covered with high mountains and ice fields. Surveys were carried on to define the boundary of the Alaska coast strip east of Mount St. Elias, and along Portland Canal. The survey of the 49th parallel was carried as far as Red river. This completes the survey of the southern boundary of British Columbia, Alberta, Saskatchewan and Manitoba, with the exception of about ninety miles between Red river and Lake of the Woods, which will be taken in hand this summer. The surveys for the re-monumenting of the 'Ashburton line' were continued along the St. Francis river and the straight line running southwesterly therefrom. Surveys were made on the lakes at the head of St. Croix river to define the boundary between New Brunswick and Maine.

The operations of the Geodetic Survey comprised reconnaissance and triangulation in many widely separated parts of the Dominion. The main net-work extends over the southern parts of Ontario and Quebec. A chain of triangulation to follow the Bay of Fundy has been begun, as a basis for the three maritime provinces. Another chain is following a course parallel to the International Boundary, from Lake Superior westward and another is in progress along the British Columbia coast.

The general plan of the Geodetic Survey contemplates the making of triangulations at places where they will be of most immediate use, the intention being to extend these local triangulations as opportunity offers until ultimately they are connected together and form a whole.

Geodetic levelling was carried on in Quebec, Ontario, Manitoba and Saskatchewan. The total distance levelled during the year was 893 miles.

A noteworthy event of the year was the twelfth annual meeting of the Astronomical and Astrophysical Society of America, which was held at the Observatory on August 23, 24, 25, 1911. Five sessions devoted to the reading and discussion of papers, to the reports of committees and to other business were held. About 35 members of the society, including many of the leading astronomers of the United States, were present. Aside from the sessions several social functions were arranged, and it is believed that all present thoroughly enjoyed themselves. Their appreciation was expressed by unanimous resolutions of thanks, and their opinion of the work of the Observatory was voiced in the following resolution which was unanimously adopted:—

> *Resolved:* That the Astronomical and Astrophysical Society of America, assembled at the Dominion Observatory for its twelfth annual meeting, has examined in detail the work of the Observatory and expresses its very favourable opinion of the character of the investigations carried on in all its departments. This is particularly the case with the determination of radial velocity, from which unusually valuable results have been obtained by means of a tele-

scope of comparatively small size. In view of the pressing need for such data, the society hopes that a more powerful telescope may soon be provided, and one in keeping with the standing now attained by the national observatory of Canada.

FORESTRY.

Good progress was made in organizing the work of administering the forest reserves. This work was greatly augmented by the large increase in the reserved area during the previous year. An experienced inspector was secured to supervise the work in Alberta, and plans were made for the inspection of the work on the eastern reserves and in the railway belt of British Columbia. Under the inspectors are placed supervisors who take charge of the actual work on each forest reserve and who are assisted by technically trained foresters and a staff of forest rangers. Progress was made in the methods of regulating the cutting of timber on forest reserves by small mills to satisfy the demands of settlers for lumber. Grazing on a portion of the Turtle Mountain Forest Reserve was provided for by the erection of a fence and by the adoption of special regulations. New regulations for grazing and timber cutting on the reserves in general are urgently needed and are now under consideration.

Six parties were engaged in timber surveys. Examinations were made of timber conditions in portions of the region between Manitoba and Hudson Bay, and also of non-agricultural forested tracts which have been recommended for inclusion in forest reserves.

The fire loss during the year was comparatively light on account of frequent rains during the summer, but during a short dry season in the spring of 1911 several fires occurred in Northern Manitoba and Saskatchewan. Only one fire killed timber in a forest reserve and this timber was sold and cut before its value had deteriorated greatly. A small steamer for fire patrol was put into use on the Athabaska river, which is often too swift for canoes.

The need of better inspection of the work and movements of the fire rangers is becoming increasingly evident in order that greater efficiency may be secured.

On account of the steadily increasing demand for trees for planting on farms, which now taxes to the utmost the output of the nursery at Indian Head, purchase was made of a half section of land near Saskatoon, and arrangements made for the establishment of a new nursery.

The collection of statistics of forest products was steadily continued and several bulletins were published giving valuable information in regard to the production and use of wood in Canada. A special investigation into the wood using industries of Ontario was made. It is of great importance that this line of work be rounded out by the initiation of thorough investigations into the waste of wood in manufacture and of experiments in new processes which might prevent waste.

REINDEER AND WOOD BUFFALO.

During the year an experimental shipment of fifty reindeer was made from Dr. Grenfell's herd at St. Anthony, Newfoundland, to Fort Smith, on Slave river, N.W.T., with a view to determining whether these animals can be successfully bred in that vicinity. It is too early, as yet, to state positively that the experiment has been sucessful, but the deer proved to be fairly good travellers and have demonstrated their ability to maintain themselves during the winter upon the moss which covers a considerable part of sub-Arctic Canada. The depredations of wolves, the pest of flies and the probability that Indian hunters will fail to discriminate between domesticated reindeer and wild caribou are problems as yet unsolved. Should this experiment prove successful a profitable industry may be developed in breeding reindeer in districts where cattle cannot be profitably maintained.

Efforts have been made to locate the several herds of wood buffalo known to be roaming in the vicinity of Fort Smith. Reliable information has been obtained of the existence of at least three herds, comprising from 300 to 500 animals, but little definite information has been secured. Further efforts are being made to locate these herds with a view to protecting them from the depredations of wolves and Indian hunters and thus to preserve from extinction the last herd of wild buffalo known to exist on this continent, where they once roamed in countless thousands.

IRRIGATION AND HYDROGRAPHIC SURVEYS.

The most prominent feature in connection with irrigation during the past year has been the rapid development of the large projects under construction by the Canadian Pacific Railway Company and the Southern Alberta Land Company. The former company has completed the works for the irrigation of the western third of its 3,000,000 acre tract near Calgary, and has applied to the government for an inspection of the system and the issue of a license for the use of water. The inspection is now under way and will, it is expected, be completed during the year. The works of the Southern Alberta Land Company are also approaching completion and will require similar inspection at an early date.

The rapid development of the West has resulted in increasing demands for water for domestic use in cities and towns and the procuring of such supply is one of the most important problems with which these growing municipalities are confronted.

The work of stream measurement, which was established upon a systematic basis some three years ago, has been extended as far as the limited appropriation would permit and the records obtained have proved of great value not only in determining the feasibility of irrigation projects, but, to an even greater extent, in connection with the development of water-power and the supply of water for domestic purposes in towns and cities. The published reports of the work have been widely circulated and it is evident from the demand for the reports and from the testimony of engineers and others that the work is appreciated by those who best know its worth.

DOMINION PARKS.

During the year a separate branch was organized for the administration of the Dominion Parks with Mr. J. B. Harkin as commissioner. Mr. Howard Douglas remained the chief outside officer with the new title of Chief Superintendent of Parks.

That the matchless scenery and natural wonders of these mountain recreation grounds are fast being recognized is evidenced by the large annual growth in the number of visitors. Nearly 75,000 visitors registered at the Rocky Mountains Park during the past year, an increase of 10,000 over 1911. To meet this large increase in traffic, increased accommodation of every sort has been found necessary. The Canadian Pacific Railway Company during the year has made additions to its hotels both at Banff and Lake Louise to meet the demands. The revenue derived from the parks is annually growing in proportion and there is every reason to look forward to a very satisfactory percentage of income upon the capital account expended.

The work of building new roads and trails to places of particular interest or beauty was continued during the year and those already existing kept in good repair. Work was also begun on the government's section of the new automobile road from Calgary to the coast. When completed this will be one of the most attractive scenic motor routes in the world, making possible as it does, a tour of some 500 miles through mountain scenery of unequalled beauty.

A new conservation dam at Lake Minnewanka in connection with the Calgary Power Company's development schemes lower down the Bow river, has been under construction. Advantage was taken by the Department of the erection of this dam to provide for the reservation of some 800 to 1,000 horse-power for its own use. This will supply an abundance of electricity in the future for lighting and other purposes at Banff at a very low cost. Reservations of tar sands were also made at Fort McMurray with a view to a future supply in connection with road construction throughout the parks.

The need of more commodious and modern buildings at the Banff Hot Springs was much felt during the year, as it was often found impossible to accommodate the increasingly large number of visitors who wished to avail themselves of the baths. Preliminary plans have been submitted for the construction of larger and more suitable buildings and it is hoped that at least one will be completed before the close of the next fiscal year.

Development work in the new Jasper Park consisted chiefly in the building and clearing of roads and trails. A contour survey was undertaken of the district between the Athabaska river and the Fiddle Creek hot springs, with a view to securing the best possible location for a road to the springs. When they are once accessible these springs will no doubt become very popular as the waters possess valuable therapeutic qualities with a considerably higher temperature than those at Banff. The Grand Trunk Pacific line is now completed through the Park and the Canadian Northern is under construction.

The Buffalo in Elk Island, Buffalo and Rocky Mountains Parks continue to thrive and show a satisfactory increase. There are now over 1,000 in Buffalo Park alone. Plans are being made for the realizing of a yearly revenue for the Department from the disposal of the old bulls, who are otherwise doomed to inevitable destruction by the herd with a consequent total loss to the government. The possibility of deriving a revenue from the fur-bearing animals of the parks is also being investigated.

WATER POWERS.

The success obtained within the last few years in the development of electric transmission of power, and the unsurpassed water-power resources of Canada, have brought this country into the first rank of economical power producing countries. Water-power, once capable of local use only, can now be developed and transmitted in the form of electric energy from remote and inconvenient places to serve the power requirements of cities and towns within an area of 100,000 square miles. Western Canada has abundance of power, and although most of it is not at present within the range of economic development, on account of distance from market or other reasons, there are important water-powers within easy transmission distance of present centres of population easily capable of supplying power needs for many years to come. Several important developments in various parts of Western Canada have already been carried to successful completion, and further important developments are in contemplation and many projects have been placed before the Department for authorization under Water Power Regulations pursuant to section 35 of the Dominion Lands Act, 3.

No special attention was given by the Department to power matters on Dominion lands until, on the recommendation of the late R. E. Young, a separate division of the Railway Lands Branch was organized in 1908 for that purpose, with J. B. Challies, hydraulic engineer of that branch, in charge. Under Mr. Young's general direction the work of that division steadily increased in scope and importance, until it was found necessary to have a separate and distinct water-power branch organized, with a recognized superintendent who could give his entire time to matters relating to water-power and reclamation of Dominion Lands. Accordingly, a 'Water-power Branch' was created in December, 1911, shortly after Mr. Young's death, with Mr. Challies as superintendent. A staff of competent consulting engineers for outside field work has been secured, the advantage of which is evidenced by the successful and satisfactory construction to date of important works, under departmental supervision. Departmental rulings with respect to design—involving stability of structure or the maximum advantageous use of the power site—when backed by such advice are rarely questioned by private interests affected, and in every case the private interest is directly and materially benefited by the advantage of extra expert experience. It has been the practice in most cases to require that the private interest benefited should reimburse the Department for the expenses incident to such expert advice.

The fundamental idea of the miscellaneous field work of the branch is to gather such data as will enable the Department to dictate the most advantageous method of utilizing important power sites, of present economic importance, having in mind all possible uses of the water for water supply, irrigation, navigation and power.

SCHOOL LANDS.

Owing to the lateness of the harvest last season and the partial failure of the crop, it was thought advisable to postpone the series of auction sales which it had been intended to hold in Saskatchewan during the summer of 1911.

A few isolated parcels were, however, disposed of in the three provinces, chiefly for railway right of way and school sites, as follows:—

Manitoba.—203·05 acres for $4,208.76, or an average of $20.73 per acre.

Saskatchewan.—1,517·27 acres for $48,429.59, or an average of $31.92 per acre.

Alberta.—373·07 acres for $5,402.54, or an average of $14.48 per acre.

According to the report of the chief of the School Lands Branch, the total area disposed of to the 31st of March, 1912, in each province, after making the necessary adjustment for cancellations and for changes in area, is as follows:

Manitoba.—Area sold to 31st March, 1912, 577,255·74 acres for $5.528,932.19.

In addition to this town lots were disposed of for $5,806, making the total represented by the sales, $5,534,738.19. Average price per acre, $9.60. Of this amount, $3,096,104.25 has been collected.

Of this sum $30,000 was advanced to the province, leaving the amount of principal collected and standing to the credit of the fund on the 31st March, 1912, $3,066,104.25.

Saskatchewan.—Area sold to March 31, 1912, 505,861.33 acres for $6.859,233.48.

Town lots were also sold for $771, making the total amount represented by the sales $6,860,004.48. Average price per acre $13.56.

Of the above amount $2,033,865.71 has been collected and was standing to the credit of the fund on the 31st March, 1912.

Alberta.—Area sold to 31st March, 1912, 557,646.27 acres for $6,429,481.89. Average price per acre $11.53.

Of the above amount $1.770, 403.63 was collected and standing to the credit of the fund on the 31st March, 1912.

GRAZING.

There were 1,332 grazing permits issued during the past year and the revenue from this source and from the grazing leases still in force was $25,968.26.

HAY.

The revenue from this source was $7,716.55.

COAL.

The number of coal leases in force at the close of the fiscal year was 89, and the revenue from these and from coal permits for domestic use was $19,622.

Attached to the report of the School Lands Branch are three statements, lettered respectively A., B. and C., showing duly classified the revenue from all sources of school lands during the fiscal year, the net total for each province being as follows:—

Manitoba	$377,710 14
Saskatchewan	539,133 98
Alberta	673,029 30
Total amount collected during the past fiscal year	$1,589,873 42

Under the provisions of the several Orders in Council in that behalf, the net revenue collected from the school lands in each province during the fiscal year, after deducting the principal moneys and the cost of management, was paid over to the government of each province, the amount so paid being as follows:—

Manitoba	$ 99,599 06
Saskatchewan	184,679 93
Alberta	185,249 76

In addition to the above amounts the following sums were paid to the Provincial Governments of Manitoba, Saskatchewan and Alberta by the Finance Department as the interest accrued on the School Lands Fund of each province for the fiscal year:—

Manitoba	$88,094 57
Saskatchewan	58,873 11
Alberta	50,797 04

Adding to the above amounts the sums paid over to the provinces for revenue collected during the fiscal year, the total payment to each province for the period mentioned was as follows:—

Manitoba	$187,693 63
Saskatchewan	243,553 04
Alberta	236,046 80

The total expenditure for the three provinces during the past year was $28,252.78, and, as the total revenue was $1,589,873.42, it will be seen that the cost of management was less than 2% of the revenue collected.

THE YUKON TERRITORY.

With regard to the development of the Yukon Territory, it is satisfactory to note that the increased price of copper has led to the re-opening of some of the copper mines near Whitehorse by a strong company which has options on many undeveloped properties, all of which it is understood are to be thoroughly tested.

In the vicinity of Dawson the Canadian Klondike Mining Company are putting together an immense dredge for use on the Klondike river, which may be operated for a short period this season.

The gold production during the last fiscal year, according to royalty returns, was $4,024,236.75, a decrease from the previous year of $2,590.75. This decrease might be accounted for by the fact that a large number of properties formerly worked by individual miners have been acquired by one concern, which has not commenced operations as yet.

I have the honour to be, sir,
Your obedient servant,

W. W. CORY,
Deputy of the Minister of the Interior.

PART I.

DOMINION LANDS

DOMINION LANDS

No. 1.

REPORT OF THE COMMISSIONER.

Office of the Commissioner of Dominion Lands,
Ottawa, July 10, 1912.

W. W. Cory, Esq., C.M.G.,
Deputy Minister of the Interior,
Ottawa.

Sir,—I beg to submit my report for the twelve months ending March 31, 1912, on the Dominion Lands Branch of this department, together with the reports of the inspectors of Dominion Land Agencies, and of the agents of Dominion Lands for the several districts.

The following summary has been prepared of the work transacted in the Dominion Lands Branch during the period mentioned as compared with the corresponding twelve months of the previous year:—

	1911.	1912.
Number of files dealt with	227,610	228,198
Letters written	164,135	162,475
Triplicates	107,049	106,447
Total letters	271,1784	268,922
Applications for patent:—		
Number examined	32,024	35,369
New applications	18,126	18,096
Applications accepted and notifications sent out	18,280	17,908

I have the honour to be, sir,
Your obedient servant,

J. W. GREENWAY,
Commissioner of Dominion Lands.

No. 2.

REPORT OF INSPECTOR OF DOMINION LAND AGENCIES.

(*H. G. Cuttle.*)

Office of the Inspector of Dominion Land Agencies,
Brandon, Manitoba, July 3, 1912.

J. W. Greenway, Esq.,
Commissioner of Dominion Lands,
Ottawa, Ontario.

Sir,—I beg to submit annual report of the Inspector of Dominion Land Agencies for the departmental year ending March 31, 1912.

My duties as inspector did not commence till May 1, 1912; I am therefore not in a position to go into detail as to the different branches of the work.

I am enclosing herewith the following statements of work performed, with comparative figures for the two preceding years:—

'A.' Dominion Land Offices.
'B.' Dominion Land Sub-Offices.
'C.' Homestead Inspectors.

I have the honour to be, sir,
Your obedient servant,

H. G. CUTTLE,
Inspector Dominion Land Agencies.

A.—Dominion Land Agencies, Manitoba and Saskatchewan, principal transactions for the Departmental year ending March 31, 1912.

Agencies.	Homestead Entries granted.	Land Sales.			S. A. Scrip.	Applications for Patent received.	Land Entries cancelled.	Timber Permits issued.	Hay Permits issued.	Letters.		Revenue.	No. of Staff.	Expenditure.	
		Ordinary.	Pre-emptions.	Purchased Homesteads.						Received.	Sent.			Salaries.	Disbursements.
												$ cts.		$ cts.	$ cts.
Battleford..........	2,486	55	274	116	62	1,042	1,032	688	353	23,637	32,101	87,338 62	9	8,784 39	2,122 77
Brandon	51	23	....	....	......	88	9	186	168	6,664	6,780	10,695 66	4	4,100 00	171 49
Dauphin...........	1,011	19	....	....	3	102	383	1,857	233	19,410	12,335	28,104 05	7	6,452 60	1,075 97
Estevan...........	903	38	506	46	19	677	665	121	302	15,229	16,525	154,183 62	5	5,715 16	518 99
Humboldt..........	1,762	57	....	....	78	1,349	481	195	383	21,193	24,374	28,578 35	8	7,415 53	1,228 54
Moosejaw..........	4,087	29	2,225	199	170	1,910	3,419	1,769	739	69,415	59,761	312,171 88	22	20,980 77	2,093 70
Prince Albert......	2,096	65	3	5	68	720	743	1,674	444	23,031	29,118	89,991 44	8	8,472 74	1,224 62
Regina............	341	45	12	11	4	729	167	16	369	13,579	12 516	37,492 51	6	5,459 59	463 17
Saskatoon.........	2,774	61	820	400	112	1,974	1,967	31	609	43,945	47,488	266,062 46	19	12,734 43	3,035 16
Swift Current......	3,455	78	1,829	183	175	1,207	2,280	769	497	34,251	41,900	262,560 93	14	10,989 82	1,467 84
Winnipeg..........	2,097	63	....	....	2	367	896	1,608	544	19,480	23,938	153,622 81	17	20,262 02	1,211 29
Yorkton...........	1,266	61	....	....	25	1,628	542	385	242	23,077	22,767	39,255 12	6	6,918 08	440 82
Totals 1911-12.	22,329	594	5,669	960	718	12,093	12 584	9,299	4,884	312,911	329,607	1,470,357 45	125	118,285 13	15,054 36
1910-11	26.734	629	8,819	1,244	1,039	12,344	14,869	8,286	3,735	307,793	317,204	1,115,769 01	120	112,136 84	17,547 93
1909-10	24,252	596	9,550	897	1,120	14,257	12,310	6,578	3,327	297,865	333,563	959,875 70	106	100,258 66	18,574 68

H. G. CUTTLE,
Inspector of Dominion Land Agencies.

B.—DOMINION Land Sub-Agencies. Manitoba and Saskatchewan. Work performed during the Departmental year ending March 31, 1912.

Name.	Place.	Applications for Homestead, Purchased Homestead and Pre-emption.	Applications for Patent.	Applications for Inspection.	Applications for Timber permits.	Applications for Hay permits.	Amounts remitted to Land Offices.	Expenditure.		Remarks.
								Salary.	Postage and Commissions.	
							$ cts.	$ cts.	$ cts.	
Anderson, S. A.	Pine Valley	34	10	2	5	12	516 00	275 00	....	Commenced Mar. 16 '11. Resig. Feb. 19 '12.
Arnasson, S.	Pine Valley	4	....	3	.....	....	40 00	25 00	44	" March 1, 1912.
Arthur, F. G.	Nokomis, Sask	158	121	61	.....	4	2,078 30	300 00	16 25	
Butcher, H.	Punnichy, Sask	76	117	54	.....	10	1,214 20	187 00	16 00	Resigned Nov. 16, 1912
Caldwell, J.	Sprague, Man.	27	10	8	2	2	340 25	275 00	3 98	Resigned Feb. 28, 1912.
Canham, J.	Sprague, Man.	3	.....	2	.....	.....	30 00	25 00	70	Commenced March 16, 1912.
Craddock, W. L.	Lanigan, Sask	118	250	72	.....	27	1,720 00	420 00	29 82	
Cook, C. C.	Arcola, Sask	1	.....	...	.....	1	12 50	25 00	42	Office closed.
Carpenter, C. A.	Wadena, Sask	343	243	132	58	8	3,480 50	364 00	30 49	
Robertson, M.	Wadena, Sask									
Saich, Jas. S. T.										
Denovan, R.	Wynyard, Sask	212	195	72	1	24	2,873 40	300 00	46 78	
DeCuninck, A.	Makinak, Man.	212	31	96	62	17	2,603 03	238 50	20 04	Resigned Feb. 17, 1912.
Dorais, A.	Gravelbourg, Sask.	248	359	202	151	49	4,069 70	300 00	23 00	
Dubois, M. J.	Duck Lake, Sask	181	65	51	37	48	2,661 40	480 00	18 97	
English, J. J.	Maple Creek, Sask	115	23	30	3	23	2,448 75	900 00	18 37	
Gilchrist, A. P.	Gull Lake, Sask	550	357	334	330	215	9,853 75	480 00	66 63	
Green, R. L.	Ogema, Sask	311	209	257	39	63	7,009 00	300 00	41 09	
Gunn, J. J.	Wilkie, Sask	203	217	100	8	34	6,996 40	600 00	45 20	
Hall, J. K.	Unity, Sask	260	149	66	.....	67	7,171 12	300 00	39 59	
Hawryluk, N.	Vita, Man	6	2	2	.....	4	166 80	75 00	79	Resigned Feb. 16, 1912.
Kulaczkowski, J.	Vita, Man.	2	3	2	.....	.....	20 00	15 00	37	Commenced March 2, 1912.
Hanger, J. W.	Shellbrook, Sask	185	74	41	235	62	2,614 95	300 00	26 53	
Harley, H.	Swan River, Man	111	22	42	143	15	2,199 10	300 00	22 35	
Hiron, J. N.	Canora, Sask	459	325	176	29	21	5,961 95	500 00	49 24	Commenced March 10, 1911.
Hazell, F.	Hanley, Sask	137	121	56	1	10	3,034 75	600 00	26 51	
Holland, W. H.	Lloydminster, Sask.	209	112	65	47	32	2,521 50	600 00	34 03	
Hunking, W. H.	Winnipegosis, Man.	42	18	17	7	11	447 75	300 00	7 41	
Hutchinson, J. C.	Kindersley, Sask	539	213	368	....	63	16,953 30	600 00	87 34	
Lapointe, P.	Willow Bunch, Sask.	763	274	263	668	128	12,580 50	720 00	25 69	
Libairon, A.	Notre Dame, Sask	39	97	34	.....	15	905 71	116 66	7 13	Commenced Oct. 9, 1911.

Maher, H.	N. Battleford, Sask.	559	349	134	123	103	8,071 25	575 00	26 65	Resigned March 15, 1912.
Chisholm, J. R.	N. Battleford, Sask.	20	12	6	5	13	410 45	25 00	2 69	Commenced March 16, 1912.
Metheral, P. E.	Weyburn, Sask.	601	276	294	.....	64	12,445 76	900 00	58 69	
Murdoch, J. D.	Zealandia, Sask.	365	318	265	.....	42	13,269 50	900 00	81 35	
Newth, R.	Lipton, Sask	47	154	58	3	8	842 50	480 00	17 76	
Oliver, C, E.	Watrous, Sask	139	97	37	.....	14	1,625 00	252 50	15 37	Commenced May 22, 1911.
Robertson, A. J.	Davidson, Sask.	161	214	90	.....	27	2,281 30	480 00	30 76	
Schionnemann, E.	Kerrobert, Sask.	387	341	227	.....	69	17,902 36	300 00	81 86	
Sigurdson, S.	Arborg, Man.	124	.....	.....	4	21	1,317 20	250 00	.....	10 months work.
Schrader, E. C.	Macklin, Sask	439	190	146	.....	60	10,764 62	435 00	78 62	
Squirrell, F. G.	Biggar, Sask.	428	154	134	11	55	8,323 10	390 00	54 35	
Unruh, Tobias	Rosthern, Sask.	167	148	49	6	6	2,195 90	500 00	22 57	
Wachna, Theo.	Stuartburn, Man.	13	2	2	26	17	200 20	275 00	2 46	Resigned Feb. 19, 1912.
Probizanski, J.	Stuartburn, Man.	3	.....	.....	4	.....	68 00	10 00	91	
Wiebe, J. F.	Herbert, Sask.	566	175	327	105	101	13,936 83	550 00	66 31	Resigned March 1, 1912.
McClelland, R. S.	Herbert, Sask.	45	14	29	10	19	1,157 35	50 00	4 73	
Young, J. W.	Melfort. Sask.	544	206	127	152	48	5,953 54	600 00	46 14	
White, F. R.	Sheho, Sask	142	202	92	7	31	2,081 50	300 00	18 59	
Totals.		10308	6469	4625	2282	1663	205,470 97	17,193 66	1,314 97	
Compared with 1910-11		10650	5965	4331	2121	1212	201,137 00	16,237 11	1,438 14	
Compared with 1909-10		11039	6914	3714	2086	1138	169,319 02	15,071 16	1,156 34	

H. G. CUTTLE,

Inspector of Dominion Land Agencies.

C.—STATEMENT showing the principal work performed by Homestead Inspectors, Manitoba and Saskatchewan, for Departmental Year ending March 31, 1912.

Name.	Headquarters.	Land Inspections made.	Applications for Patent taken.	Miles travelled by Wagon.	Miles travelled by Rail.	Travelling Expenses for Self and Team.	Remarks.
						$	
Bowyer, H. L.	Moosejaw, Sask.	36	23	703	442	330 25	Commenced Nov. 30, 1911.
Brandt, P. R.	Regina ″	11	2	217	969	100 50	″ Jan. 2, 1911.
Buchanan, D.	Basswood, Man.	277	201	5,134	1,980	938 73	
Budgeon, M. B.	Prince Albert, Sask.	287	8	5,174	5,024	999 48	11 months work.
Clouston, G. H.	Battleford ″	123	29	4,009	1,396	705 85	
Collins, F. M.	Radisson ″	71	9	690	1,178	374 60	Commenced Feb. 19, 1912.
Darroch, E. J.	Swan River, Man.	292	57	3,314	2,806	1,005 19	
Dickin, Geo.	Manor, Sask.	57	3	521	3,936	551 96	Commenced in Dec., 1911.
Duggan, L.	Humboldt, Sask.	132	3	1,877	3,225	922 30	10 months work.
Dodds, J. T.	Swift Current, Sask.	223	19	1,972	574	460 70	6 ″
Douglas, A. C.	Brandon, Man.	24	21	484	1,218	146 45	Commenced Jan. 2, 1912.
Erratt, W. H.	Moosejaw, Sask.	76	19	1,222	145	272 34	″ Dec., 1811.
Gibson, J. S.	Brandon, Man.	83	26	882	2,639	346 90	9 mths. work; resigned Dec. 31, '11.
Gillespie, W. D.	Teulon, ″	59	6	1,245	772	490 85	Commenced Dec. 5, 1911.
Goodrich, J. S.	Radisson, Sask.	115	73	1,507	1,395	379 45	4 months work.
Jonasson, P. C.	Winnipeg, Man.	172	56	2,101	1,140	712 65	8 ″
Kennedy, F.	Regina, Sask.	177	51	2,819	4,569	763 64	9 ″
Lagimodière, W.	Winnipeg, Man.	205	62	2,899	3,277	1,066 01	
McGregor, R. E.	Gilbert Plains, Man.	51	31	996	1,299	383 80	6 months work.
McGowan, G.	Yorkton, Sask.	1	....	10	430	30 10	1 ″
McKenzie, Geo. A.	Morse ″	149	169	2,402	240	325 90	6 ″
McCarthy, D. J.	Lloydminster, Sask.	152	49	4,536	3,183	896 35	
McLeod, A.	Yorkton ″	399	165	3,742	2,161	800 25	
McLeod, D.	″ ″	374	236	5,589	2,251	997 87	
Milburn, W.	Swift Current ″	310	70	4,132	860	716 50	
Moffat, J.	Marcelin ″	184	172	5,433	1,501	896 24	Resigned Dec. 10, 1911.
Morrison, D.	Selkirk, Man.	269	38	2,533	1,221	713 55	9 months work.
Moubert, H.	Moosejaw, Sask.	223	67	3,169	1,858	1,016 20	6 ″
Nichol, W. F.	Estevan ″	133	153	3,275	1,684	1,047 68	
Oliver, E.	Fertile Valley, Sask.	3	19	225	74	33 20	1 month work.
Nurse, A.	Lanigan ″	234	3	4,093	2,571	825 70	
Ostrosky, M.	Winnipeg, Man.	99	....	2,030	17,798	1,248 84	10 months work.
Pentland, R. P.	Hanley, Sask.	163	13	3,160	1,322	888 19	11 ″
Porteous, L. C.	Weyburn ″	148	29	2,414	2,671	635 55	6 ″

Reykdal, Paul........	Winnipeg, Man	42	3	283	294	125	70	Commenced Mar. 14, 1912.
Shields, Wm	Swift Current, Sask.....	53	....	720	1,882	419	60	4 months work.
Skene, Alex......	Grand Coulee "	183	139	3,557	3,150	802	90	11 "
Snell, S	Prince Albert "	87	2	1,513	406	376	65	4 "
Sparshatt, A. E.	Swift Current "	19	16	290	. . . .	268	45	Commenced work Dec. 12, 1911.
Smith, Gavin G.... ...	Battleford "	119	39	2,575	1,222	1,277	35	
Speers, Geo. L	Roblin, Man	61	101	1,823	747	759	35	Commenced Nov. 20, 1911.
Sutton, C............. ..	Fertile Valley, Sask. ..	333	66	3,437	1,458	899	58	9 mths work, ; resigned Oct. 1, 1911.
Vollmer, F. J.	Moosejaw "	225	115	2,906	458	486	55	9 months work.
Yake, J. F...	" "	121	114	1,305	1,150	354	00	Resigned August 12, 1911.
Totals	....	6,555	2,507	102,618	88,585	26,365	90	
Compared with 1910-11..	....	6,462	2,688	108,490	88,137	26,445	20	
" 1909-10..	... .	6,516	3,396	114,660	61,251	24,884	98	

H. G. CUTTLE,

Inspector of Dominion Land Agencies.

No. 3.

REPORT OF INSPECTOR OF DOMINION LAND AGENCIES.

(*J. W. Martin.*)

Office of Inspector of Dominion Land Agencies,
Calgary, Alberta, May 1, 1912.

J. W. Greenway, Esq.,
Commissioner of Dominion Lands,
Ottawa.

Sir,—I beg to submit herein my annual report for the fiscal year ended March 31 last.

From time to time during the past year I have made regular inspections of the different land agencies and a few of the sub-agencies, and I have much pleasure in stating that the business at all of the offices was found to be in good condition. The sub-agencies have been checked regularly by Assistant Inspector Mr. J. A. Bannerman, who has, as well as myself, attended to a large number of special investigations during the period just past. Our reports in connection with these different inspections have been submitted to you, and I believe the general work has been found satisfactory.

As each agent has submitted to you an annual report, there is no need of my going into detail as regards the volume of work at each point, but I am submitting below a comparative statement of the years 1911 and 1912, which will give you a good idea of the general increase in business throughout my territory.

A new land office was opened last year at Grande Prairie, Alberta, which is situated in the renowned Peace River country. A homestead inspector is attached to this office and the agency is in a position to transact business to the satisfaction of the public, as well as the department. It is expected that this agency will do considerable business during the coming season, as indications point to quite an influx of settlers to the Peace River country during the summer and fall of 1912.

A few sub-agencies have been established during the past year at convenient points through the province of Alberta, and one or two additional homestead inspectors have been appointed, which, with the additional offices, should enable the officials to look after the business of the department in a very satisfactory manner indeed.

A few additions have been made to the numbers of the staffs at different offices, which additions were required on account of the increased volume of work. Several resigations of officials have been handed in during the past year, but successors were appointed promptly by the department, thereby lessening to a minimum any interference with the discharge of business.

Large expenditures were incurred by the two irrigation companies in southern Alberta during the past season, and this year promises to be the busiest in the history of these projects.

In the early part of last season indications pointed to a wonderful harvest, but on account of the continued wet weather during the latter part of the season, the crop was somewhat of a disappointment. The yield was particularly good, but on account of so much moisture it did not give the grain a chance to ripen sufficiently and the grades were not of as high a standard as usual; however, a great deal of grain which did not grade satisfactorily was turned into feed and the farmers through the province were able to dispose of the same to good advantage. The crop prospects for 1912 are very bright, as the weather so far this spring has been ideal. While a large portion of the land which was under crop last year is not planted so far, but is in summer-fallow, the breaking which was done last year, a large portion of which is planted this spring, will probably offset this.

A great deal of railway construction was carried on during the summer and fall of 1911 and before the expiration of 1912 a good many more branch lines throughout the province, it is expected, will be in operation. It is also expected that considerable activity in railway construction in the north country will be carried on during this year.

From all over the country reports are received and all portions of the west seem to have a general air of prosperity. Present indications point to a large influx of settlers for 1912.

Below will be found the comparative statement referred to.

Agency.	Revenue.		Expenses.	
	1911.	1912.	1911.	1912.
	$ cts.	$ cts.	$ cts.	$ cts.
Lethbridge	148,503 37	221,116 21	9,006 48	8,206 37
Calgary	285,273 29	384,560 24	21,555 62	20,639 56
Red Deer	80,515 50	91,296 26	8,012 79	8,281 75
Edmonton	320,733 97	317,076 24	22,212 88	24,411 30
Medicine Hat	155,633 70	547,584 24	11,748 66	11,846 50
Peace River	4,316 19	6,960 67	4,448 65	5,449 32
Kamloops	41,089 35	63,463 66	4,719 62	7,217 26
New Westminster	7,159 59	14,536 98	2,511 00	5,620 47
Grande Prairie	(9 months)	7,352 13	(9 months)	3,048 17
Totals	1,043,224 96	1,653,946 65	84,215 70	94,720 70
Totals 1911		1,043,224 96		84,215 70
Increase		610,721 69		10,505 00

Your obedient servant,

J. W. MARTIN,
Inspector.

No. 4.

REPORT OF THE AGENT AT BATTLEFORD.

Battleford, Saskatchewan, April 10, 1912.

The Commissioner of Dominion Lands,
Ottawa.

Sir,—I have the honour to submit for your consideration the annual report of this office for the fiscal year ending March 31, 1912.

A number of new townships were thrown open for settlement during the year in the northern part of the district, all of them containing large areas of first-class arable land with the advantage of a plentiful supply of water and timber. These lands are being rapidly taken up, many of the entrants being settlers who disposed of their patented homestead and pre-emption at high figures and located South African scrips.

A new branch of the Canadian Northern railway is now in operation from North Battleford to Mervin, a distance of about 45 miles in a northwesterly direction. To the south the roadbed of the Biggar to Battleford branch of the Grand Trunk Pacific railway is practically completed and ready for the steel. It is expected to be in operation early this summer, as may possibly be the case with the Battleford to Cut Knife branch. Another branch of the same railway is to be built from Saskatoon to Battleford, and when this is done this point will then be an important railway centre.

The past winter has been remarkably mild and free from storms and no loss has been sustained by stock owners. The snow had completely disappeared by the end of March. The weather has been very warm since then and seeding will be general in a few days.

Last year's crops were damaged by frost and a lot of the grain could not be threshed, but good prices somewhat made up for the otherwise serious losses. The price of cattle has also very materially increased during the last few years.

There has been an increase of over $15,000 in the general revenue of this office over the preceding year and a corresponding increase of work.

The following is a statement of the work performed during the past year:—

	Number.	Revenue.
Homestead entries	2.486	$24.840 00
Pre-emption entries	274	2,730 00
Purchased homestead entries	116	1,150 00
Improvements	159	8,562 47
Land sales	55	4.994 85
Pre-emption payments	106	11.494 51
Purchased homestead payments	161	29.272 85
Townsite sales	13	690 48
Search, map sales, office fees, &c.	527	141 60
Timber permits (Dominion lands)	683	351 10
Timber seizures "	7	27 05
Hay permits "	241	771 65
Grazing rentals "	1	5 26

	Number.	Revenue.
Timber permits (school lands)	5	$ 11 00
Hay permits "	237	596 80
Grazing rentals "	33	400 60
Seed grain and provision repayments	26	1,081 44
Mining fees	42	193 50
Mining rentals	2	23 40
South African scrips located	156	....
Half-breed scrips located	2	....
Applications for patent received	1,042	....
Applications for inspection received	642	....
Entries cancelled	932	....
Letters received	23,637	....
Letters written	32,104	....
Total revenue		$87,338 62

Your obedient servant,

L. P. O. NOEL,
Agent of Dominion Lands.

No. 5.

REPORT OF THE AGENT AT BRANDON.

Department of the Interior.
Dominion Lands and Crown Timber Office,
Brandon, Manitoba, April 4, 1912.

J. W. Greenway, Esq.,
Commissioner of Dominion Lands,
Ottawa.

Sir,—I have the honour to submit my report for the year ending March 31, 1912.

The spring is opening under very favourable conditions, the heavy rains of last fall and the severe frost during the winter insuring good crop conditions for the present year. The farmers are busy preparing to seed, which in some parts has already commenced. The area cropped increases annually and, instead of exclusive wheat growing, attention is being paid to other grains and roots.

Stock raising is one of the chief industries in Manitoba. The importation of thoroughbred horses, cattle, sheep and swine, as displayed at the winter fair held here in March last, would do credit to one of the older provinces, and this fair is a great incentive to all farmers to improve their stock. More attention could be paid with advantage to poultry raising, as the province does not raise enough for its own consumption, and large quantities of fowls and eggs have to be imported. There is an ever increasing demand for farm lands from outside parties, both for purchase and homestead. Many of the improved farms in this district, close to the city, have changed hands at prices ranging from $35 to $40 per acre. The lands available for homesteading in my agency are being secured by farmers who have purchased lands in the vicinity, or by their sons. The homesteaders in most cases fulfil their duties, attaching more importance to their farming operations than formerly.

Immigration has already commenced, large numbers coming from Great Britain and the United States. Many go further west. The farmers depend upon these settlers for both outside and inside help and the wages paid them are very high.

The following is a statement of the work performed during the past year:—

Homestead entries granted	51
Timber permits issued	186
Hay permits issued	168
Entries cancelled	9
Applications for patents	88
Letters received	6,664
Letters written	6,780

I am, sir,
Your obedient servant,

L. J. CLEMENT,
Agent of Dominion Lands.

No. 6.

REPORT OF THE AGENT AT CALGARY.

Department of the Interior,
Dominion Lands and Crown Timber Office,
Calgary, Alberta, May 6, 1912.

J. W. Greenway, Esq.,
Commissioner of Dominion Lands,
Ottawa, Ont.

Sir,—I have the honour to submit herewith my annual report of the work of this office for the fiscal year ending March 31, 1912.

The lands disposed of as free homesteads, including South African scrip and Half-breed scrip, make a total of 6,461 entries, representing approximately 1,033,760 acres.

Settlement has been carried on during the past year with undiminished vigour. In the last annual report of the office, attention was directed to the tract of country east of the Red Deer river, through which railway construction was being pushed forward. The greater part of this territory will be served by the Canadian Northern railway by the end of the present season, and with the opening of many new post offices, transportation facilities and other developments which attend the advent of a railway line, a great degree of stability will be imparted to the entire district. First-class agricultural land, as a result of the free homesteading policy, has become scarce, and realizing this scarcity settlers are more careful in holding down their claims than in past years, knowing as they do that if they lose their homestead it will be difficult to secure another desirable one. Consequently, although the cancellation work of the office is still important, considerable care is being exercised by homesteaders in filing their defences and making an effort to carry on their duties.

According to this year's district map there are approximately 769,760 acres of land still available, representing some 4,811 free homesteads, and while, as has been pointed out, this land is not first-class, it is of a class very desirable for the grazing of stock and mixed farming generally.

There has been no diminution in the number of enquiries from intending settlers from the United States as well as from the British Isles and eastern Canada. There were received here during the past year 80,050 letters, and 85,745 were mailed from the office.

The weather last fall seriously delayed threshing operations, and in a large number of cases grain had to be left in the field in stook. It was feared that this grain would be greatly damaged, but general reports show that these fears were unfounded.

The congestion of grain at terminal points has caused considerable delay and inconvenience in marketing it, and it would appear as if there would be not much prospect of entirely overcoming this difficulty until transportation and storage elevators, both at points of production and the terminals, shall have greatly increased. If this congestion should have a tendency to force farmers to engage in a more diversified form of farming it will not be an unmixed evil, and it would almost seem as if the time were opportune for inclusion in the requirements of earning patent for lands, for each homesteader to have at least a certain number of cattle and swine. This would have a far-reaching effect; it would necessitate a more permanent residence on the land and prevent the land from being impoverished by being continually cropped without fertilizing, and also insure the farmer a much better return, by marketing the finished product in the shape of beef cattle and hogs, instead of the raw product alone.

The prospects for the coming season were never better. Winter wheat came through the winter without any damage at all, and inspectors report that it is showing up finely, particularly in the southern districts where it is more extensively grown.

The past winter has also been a good one for the cattle industry, having been entirely free from severe storms. There has been a noticeable upward trend in the price of beef.

The leniency extended by the Department in not forcing payments on pre-emptions has been greatly appreciated by the settlers, and will enable them to retain the land and carry on their duties, which otherwise they could not have done in a great many cases.

A general review of conditions shows that the prospects for the present year are excellent. All classes are imbued with a feeling of optimism. Building activity is only limited by dealers in building material not being able to get the quantity needed, and by the scarcity of labour which is general all over the west in all lines of enterprise.

The cost of living has increased fully 15 per cent during the past year, and there is no apparent hope of any abatement.

The following is a statement showing in detail the transactions of the Dominion Lands Branch:—

	Number.	Revenue.
Homestead entries	3,836	$38,300 00
Pre-emption entries	2,147	21,430 00
Purchased homesteads	143	1,430 00
Improvements	336	21,785 49
Land sales (cash)	86	15,039 39
Pre-emption payments	2,840	162,150 37
Purchased homestead payments	427	44,178 75
Searches, maps, etc	442	110 50
Applications for patent received	1,070	....
Applications for inspection received	2,038	....
Entries cancelled	3,733	....

	Number.	Revenue.
South African volunteer bounty entrics	242	....
Half-breed scrip	7	....
		$304,424 41

Your obedient servant,

W. E. TALBOT.
Agent of Dominion Lands.

No. 7.

REPORT OF THE AGENT AT DAUPHIN.

Department of the Interior,
Dominion Lands and Crown Timber Office,
Dauphin, Manitoba, April 2, 1912.

J. W. Greenway, Esq.,
Commissioner of Dominion Lands,
Ottawa, Ont.

Sir,—I have the honour to report as follows on the Dauphin Land District for the year ending March 31 last.

The business has been heavy throughout, though the cash received is only slightly in excess of last year. The extra work has largely been in connection with the free timber permits, which are considerably more numerous than in any previous year. The total permits were 1,814; receipts from same $8,560.94, against 1,367 last year with cash $6,636.49, a difference of $1,924.45, averaging only $4.06 per permit for the extra number, showing that very many free permits were secured. Of these I feel confident many were not due the applicants, though every precaution possible was taken in the office to avoid the issue of fraudulent ones, but owing to the fact that requisitions had to be, or were taken by justices of the peace and commissioners, it was found that affidavits were accepted by these officers which should never have been taken, and would not have been had they been presented for swearing to any of our own officers. I would strongly urge that before another winter some scheme be evolved whereby all requisitions shall be taken before either officers of the Department, or others who will adhere to the regulations and insist on applicants telling the truth and the whole truth as to their claims for free timber.

I have one instance before me where a commissioner has evidently deliberately dated a jurat some five days before the actual date on which the applicant presented himself before the officer, this with a view to assisting the applicant to evade a seizure of timber which he had cut prior to making requisition or securing permit.

The work of keeping the accounts of each timber reserve separate from each other and from the Crown lands outside of these reserves added considerably to the work but will without doubt be of great assistance to the Forestry branch.

Homestead entries are within one of last year's number, but from the numerous letters of inquiry received I anticipate a marked increase for the coming year. Many of these letters are from settlers in the west, due doubtless to the fact that owing to dry seasons, on the open plains, attention is now being drawn to our bush and scrub lands, which in the past have always been well watered; another cause no doubt being the projection of the Hudson Bay railroad, traversing this district.

Crops were good and generally harvested in fair condition, prices high and little difficulty in getting grains to market, no marked shortage of cars existing so far as I can gather. Owing to the early closing of fall, but little plowing was accomplished, less in fact than I can remember being the case during my many years here, and it is to be hoped that the present promise of an early spring may be fulfilled, so as to enable our farmers to get on the lands with as little delay as possible, and in this way make up the shortage.

Trade has been good, wages rising steadily, in all trades, and the cost of living in towns increasing very fast, this due no doubt to the general prosperity of the people as a whole.

The improvements in roads, &c., have been marked, these taking a more permanent character, steel being adopted in all the principal bridges being erected. All kinds of stock wintered well, as feed was plentiful, and the weather, barring parts of January, all that could be wished; that month was very cold. There were practically no storms, and but a light snow fall, excepting in the north, but there was ample for the usual timber operations, which I understand were prosecuted by the larger mill men to a considerable extent.

A report that placer gold had been discovered near Minitonas on the Canadian Northern, some 100 miles distant, created a small rush, but this was proved unquestionably to be without any foundation, and the excitement ceased as quickly as it started, though a very large number of people rushed to the ground, and some 40 filed locations. Practically the whole country side was staked, irrespective of any discoveries, and had the results proved that there was gold there, much litigation would have resulted, owing to irregular stakings, &c.

I would suggest that a limit be placed on the time during which a homesteader can acquire a free timber permit, and would suggest not more than five years from date of entry, as in my opinion a settler who has not availed himself of the privilege in that space of time, should, if of any use to the country, be in a position to pay stumpage on such timber as he may require, this more especially as the supply of available timber is rapidly decreasing.

The health of the district has been good, no epidemic having visited it.

I subjoin a statement of the principal items of work passed through the office during the year.

Your obedient servant,

F. K. HERCHMER,
Agent of Dominion Lands.

Synopsis of principal items of work passed through the Dauphin Lands and Timber Office during year ending March 31, 1912:—

	Number.	Cash Received.
Homesteads	1,011	$10,100 00
Improvement payments	101	3,275 15
Land sales cash	19	1,026 90
Searches	475	121 77
Applications for patent received	402	....
" cancellation	342	....
Cancellations effected	383	....

	Number.	Cash Received.
Timber Reserves and Dominion Lands—		
Bonus	1	200 00
Rents	1	25 00
Timber permits	1,814	8,560 94
Seizures	39	1,833 45
Hay permits	115	287 05
Mining—		
Location fees	38	190 00
Assessments	1	102 50
Sundries	7	16 00
School Lands—		
Sales	7	1,790 52
Timber permits	16	209 75
Hay permits	118	240 60
Rentals	3	32 57
Miscellaneous—		
Seed lien payments	4	76 85
Total cash		$28,104 05
Letters received	19,410	....
" written	15,935	....
Staff	7; salaries,	$6,452 60

No. 8.

REPORT OF THE AGENT AT EDMONTON.

Department of the Interior,
Dominion Lands and Crown Timber Office,
Edmonton, Alberta, April 6, 1912.

The Commissioner of Dominion Lands,
Department of the Interior,
Ottawa, Ont.

Sir,—I have the honour of submitting the annual report of the work of this office for the fiscal year ending March 31, 1912.

It is gratifying to note that the past year has been one of exceptional industrial and commercial development, and was generally favourable to the settlers within the district. Though the season was somewhat backward and the ripening of the crops was thereby delayed, yet the loss resulting from early frosts was confined to comparatively small areas, and within these areas was only partial. The winter season was unusually mild and throughout the year employment was easily obtained at very satisfactory wages.

A year ago I reported an increase of 25 per cent in the number of homestead entries granted over the preceding year, and, as will be seen from the figures below, there has been a similar increase this year. This settlement has been well distributed around the outer margin of the district, with a natural preference for those parts through or towards which railways are being built. As to the class of settlers coming into this district, the high standard of the preceding year has been fully maintained.

As will be observed from the figures below, the general revenue of this office has fallen some three thousand dollars below that of last year, and this falling off, amounting to nearly fifty thousand dollars, took place in the Mining Lands and Yukon Branch. This, it would appear, is due to two causes: first, the failure to find petroleum on the lands leased for that purpose, the second, the fact that a large amount of the rentals paid was forwarded direct to head office. It will be observed, too, that the very marked increase in the revenue of the other branches almost made up for this shortage. The actual work handled by this office was undoubtedly greater than for the preceding year, and this is true even of the Mines Branch, which showed so great a falling off in revenue. Throughout the year there has been a constant endeavour to place and keep the records of this office in the best possible condition, and for whatever has been accomplished in this direction, the agent cheerfully acknowledges the loyal co-operation of a good staff.

For your information I attach the following comparative statement:—

	1911.	1912.
Patent Branch—		
Homestead entries	5,109	6,386
Pre-emption entries	17	16
Purchased homesteads	40	19
Land sales	197	206
Applications for patent	2,725	2,599
Applications for inspection	1,531	1,976
Entries cancelled	2,582	2,651
Revenue	$86,826.11	$104,987.09
Timber, Grazing and Irrigation—		
Timber permits	1,945	2,190
Hay permits	533	589
Timber seizures	54	55
Revenue	$48,037.18	$77,655.18
Mining Lands and Yukon—		
Mining fees	112	67
Rentals	78	84
Royalties	37	36
Coal permits	3	4
Sundries	953	101
Revenue	$126,097.68	$175,747.58
School Lands—		
Timber permits	27	34
Hay permits	397	385
Grazing rentals	30	40
Coal rentals	9	2
Sundries	17	31
Revenue	$4,600.24	$5,019.36
Miscellaneous—		..
Seed grain payments	134	81
Revenue	$5,522.86	$3,316.00

	1911.	1912.
General—		
Letters received	73,765	78,830
Letters written	82,371	90,537
Total revenue	$320,733.97	$317,076.24

Your obedient servant,

K. W. MACKENZIE,
Agent of Dominion Lands.

No. 9.

REPORT OF THE AGENT AT ESTEVAN.

Department of the Interior,
Dominion Lands and Crown Timber Office,
Estevan, Saskatchewan, April 12, 1912.

J. W. Greenway, Esq.,
Commissioner of Dominion Lands,
Ottawa, Ont.

Sir,—I have the honour to submit the annual report of this office for the year ending March 31, 1912.

The business transacted during the year shows a substantial increase over the previous year in all branches. There has been a slight falling off in the number of homestead entries, owing to the fact that the lands now open for settlement are at the west end of the district and a considerable distance from the railway.

The Weyburn-Lethbridge branch has been running trains as far as Ogema for some months, and it is expected that in a short time the service will be extended further west. This will be a great boon to the settlers of that district. The Canadian Pacific railway are also building a line west from Estevan and expect to have steel laid this year.

The crops throughout most of this district last year were very good, but owing to the rains during the threshing season and early setting in of winter, a considerable amount of grain was not threshed. Contrary, however, to expectations flax and wheat which lay out all winter are in much better condition than was expected.

There has been no car shortage at this point, so that farmers have had no difficulty in shipping their grain.

Much satisfaction has been expressed by the holders of purchased homesteads that the erection of a $300 house is no longer necessary if they are residing on their free homesteads, and also the fact that homesteaders who are performing the necessary duties by residing in the vicinity are relieved of the necessity of erecting a house on the homestead.

Appended is a statement of work during the fiscal year, the total revenue being $154,183.62 against $62,726.02 for the previous year.

Letters received	15,229
Letters sent	16,525
Applications for patent	677

Entries cancelled	665
Applications for inspection	510
Homestead entries	903
Pre-emption entries	506
Purchased homestead entries	46
Improvements	45
Land sales (cash)	38
South African Volunteer scrip	19
Pre-emption payments	700
Purchased homestead payments	152
Searches	696
Timber permits	121
Hay permits	302
Grazing permits	9
Coal lands mining fee	24
Coal lands rental	21
Coal lands royalty	48
Seed grain payments	3
Total revenue	$154,183.62

Your obedient servant,

R. CLAUD KISBEY,
Agent of Dominion Lands.

No. 10.

REPORT OF THE AGENT AT GRANDE PRAIRIE.

DEPARTMENT OF THE INTERIOR,
DOMINION LANDS AND CROWN TIMBER OFFICE,
GRANDE PRAIRIE, ALBERTA, April 9, 1912.

The Commissioner of Dominion Lands,
Department of the Interior,
Ottawa, Ont.

SIR,—I have the honour to submit herewith my report of the work of this office for the fiscal year ending March 31, 1912.

This agency comprises what was formerly the western portion of the Peace River district, and the office was first opened on July 15, 1911. For a short time business was carried on in the house of a homesteader, Mr. John Wilson, whose land adjoins the townsite of Grande Prairie, but the office was afterwards moved to the present building on the townsite, a more suitable and convenient place both for the staff and for the public.

The opening of the office here has proved a great boon to the settlers coming in to the Grande Prairie country, as it saves them the necessity of making the long and hard trip to Grouard to file their entries and in many other ways makes the business of homesteading much easier and better for them as well as for the Department.

Last summer proved to be an exceptionally wet and rainy one, but, notwithstanding the fact that the Edson trail, the shortest route to the Prairie, was almost impassable until well on into the fall, many new settlers came in to locate, particularly those who had purchased South African volunteer bounty scrip.

In spite of the unusually heavy rains, the crops everywhere on the Prairie turned out well, oats, the principal crop, yielding from 80 to 100 bushels per acre and of very fair quality. Naturally in such a newly settled country there is not a great area of land under cultivation, but the coming year will see a great change in this respect; and such cultivation as has been done has clearly proven that the soil of Grande Prairie is unsurpassed for the raising of grain, roots and vegetables.

The one real need of the country is railroad connection with outside points; once this is obtained the cost of living will be reduced to ordinary rates, the settlers will have a market for their produce and the district will grow at a wonderful rate.

The past winter has been a most delightful one; no storms and but three short cold spells of only three or four days duration. There was just enough snow for good sleighing, and this gave the settlers an opportunity to freight in their yearly supply of food, &c. Numbers of new settlers also took advantage of the sleighing to bring in complete outfits, and now that the snow has all gone and their homesteads are located, they are ready to commence work on the land.

Judging from the number of letters received at this office inquiring about this country and from reports brought in by settlers, this spring will see a great influx of homesteaders to the Grand Prairie. A number of these will doubtless turn back when confronted with the difficulties to be encountered on the trail and by the very high prices charged on the Prairie for necessary items of food and clothing, but the best of them will persevere and join with the older settlers, who have been through the same trials, in boosting the country and fighting for proper railroad facilities.

Appended hereto is a statement of work performed in this office during the nine months ending March 31, 1912.

Your obedient servant,

A. B. MACLEAN,
Agent of Dominion Lands.

STATEMENT of work performed at the Grande Prairie Dominion Lands Agency for the nine months ending March 31, 1912.

Patent Branch—		
Homestead fees	492	$4,910 00
Improvements	22	966 00
Land sales	23	1,154 33
Searches, &c.	16	5 45
Applications for patent	4	....
Applications for inspection	16	....
Entries cancelled	98	....
South African bounty scrip	157	....
Half-breed scrip	11	....
Total Dominion lands		$7,035 78
Timber, Grazing and Irrigation—		
Timber permits	22	$ 5 50
Hay permits	35	155 20
Sundries	3	12 50
Total timber, grazing and irrigation		$ 173 20

Mining Lands and Yukon Branch—		
Mining fees	1	$ 5 00
Total mining lands and Yukon		$ 5 00
School Lands Branch—		
Hay permits	7	$ 20 80
Grazing rentals	6	117 35
Total school lands		$ 138 15
General—		
Letters received	2,243	....
Letters written	2,012	....
Grand total		$7,352 13

No. 11.

REPORT OF THE AGENT AT GROUARD.

Department of the Interior,
Dominion Lands and Crown Timber Office,
Grouard, Alberta, April 16, 1912.

J. W. Greenway, Esq.,
Commissioner of Dominion Lands,
Ottawa, Ont.

Sir,—I have the honour to submit herewith the annual report of the Peace River agency for the fiscal year ending March 31, 1912.

As usual for this part of Northern Alberta the work performed shows very gratifying results.

Below are figures giving a favourable comparison between the present year and the year ending March 31, 1911.

	12 months ending March 31, 1912.	12 months ending March 31, 1911.
Homestead entries	452	291
South African scrip	136	103
Entries cancelled	33	35
Letters received	2,590	2,743
Letters written	1,933	1,752
Total revenue	$6,960.67	$4,316.69

The coming year promises to be an excellent one. News about a great influx of immigration to the Peace River district is spreading very rapidly, and we are receiving letters from all over the continent and many parts of Europe inquiring about the Peace River country and its possibilities.

Your obedient servant,

A. C. LaRIVIERE,
Agent of Dominion Lands.

No. 12.

REPORT OF THE AGENT AT HUMBOLDT.

Department of the Interior,
Dominion Lands and Crown Timber Office,
Humboldt, Saskatchewan, April 1, 1912.

The Commissioner of Dominion Lands,
Ottawa, Ont.

Sir,—I beg to submit the annual report of the Humboldt Dominion Land Agency for the year ending March 31, 1912.

A slightly increased number of homesteads were granted this year over the preceding one, the South African scrip entries were nearly doubled, while entries cancelled showed a decrease from those of the former year. The figures are as follows:—

	1910-11.	1911-12.
Homesteads	1,739	1,762
South African Volunteer scrip	47	78
Cancellations	656	481

The total receipts for the year amounted to $28,578.

During the year, owing to our congested space, a rearrangement of our filing system had to be carried out, whereby the files of the patented lands were separated from the unpatented. This entailed a great amount of overtime work for the whole of the staff, but gave a very considerable additional space, which was badly required.

I am very pleased to be able to state that the new building for post office, customs house and Dominion Lands office is being proceeded with very satisfactorily, and I trust that before winter comes around, the Dominion Lands office will be in more suitable quarters, as the present building is entirely too small.

The past year was remarkable in many respects. A very promising season tapered off into a wet, late harvest. Threshing was delayed in many places till after the snow fell and the transportation companies, owing to the lateness of the season, could not avail themselves to the same extent as in former years of the assistance of the water route; and where in former years a third of the crop had been moved, only a start had been made in the year now passed. Traffic became congested, farmers were clamouring for cars and all lines of business felt the deleterious effects of the blockade. A feature to which to some considerable extent might be attributable this congestion of traffic, was the largely increased use of tractor engines in farm operations and, through their use, the consequent increase in cultivation. The railway companies did not appear to have estimated correctly and made provision for such an enormous increase. If this increase is as rapid this year, and it bids fair to be, unless means are adopted to minimize the effect, we shall have the same deplorable conditions the coming autumn. The transportation question still bulks very large in the west. It is a problem that the building of the Grand Trunk Pacific railway has not solved, and while the building of the Hudson Bay railway will help the situation, that will not suffice. It is impossible for the existing transportation companies to keep pace with the tremendous development and the cry of the west in the next few years will be 'more railways'. In the meantime statistics showing the area under cultivation the coming season should be carefully considered by the government and transportation companies, and provision arranged as nearly as possible with regard to motive power and box cars to handle the approximated yield. The storage capacity throughout the country should also be carefully considered and efforts made to stimulate the building of elevators where required.

Appended is a statement of work performed during the year.

I have the honour to be, sir,
Your obedient servant,

A. NORQUAY,
Agent of Dominion Lands.

Statement of work, year ending March 31, 1912:—

		Number.
Homesteads		1,762
Applications for patent		1,268
South African volunteer scrips		78
Entries cancelled		481
Land sales		57
Searches		778
Applications for cancellation		549
Timber permits (Dominion lands)		195
Timber seizures “		1
Timber permit excess dues		150
Hay permit “		11
Hay permits (School lands)		283
Grazing permits “		66
Timber permit “ excess dues		1
Hay permit “ “		10
Seed grain repayments		14
Letters received		21,193
Letters written		24,374
Number of staff		8
Salaries	$7.415 53	....
Contingent expenditures	1.228 54	....

No. 13.

REPORT OF THE AGENT AT KAMLOOPS.

Department of the Interior,
Dominion Lands and Crown Timber Office,
Kamloops, B.C., April 15, 1912.

J. W. Greenway, Esq.,
Commissioner of Dominion Lands,
Ottawa, Ont.

Sir,—I have the honour to submit my annual report for the fiscal year ending March 31, 1912. The year just completed has proved a most successful one, in spite of the fact that the major portion of the area comprising my district is still held under the general reservation which was placed upon it in the month of June, 1909.

Many additional squatters are locating upon the lands, surveyed and unsurveyed, in the reserved territory, thus making the situation a more difficult and complicated one to settle. The general revenue from the agency shows an increase of 54 per cent over the corresponding period of the previous year.

The past winter, which was rather more prolonged than usual, was nevertheless an excellent one, although there were several cold spells. The snowfall was abnormal, necessitating considerable feeding of stock, but the cattle and horses have come through splendidly, and I have much pleasure in reporting very few losses, some of the cattlemen averaging a loss of about 3 per cent. The exceptionally heavy fall of snow, which has remained on the ground almost to date, practically assures good crops for this season.

The settlers coming into the district have been of an excellent class and they appear satisfied with the conditions existing.

While there are still excellent homesteads to be secured in the Kamloops division, the bulk of the best land therein has already been disposed of. From a perusal of the maps issued by the department, showing considerable vacant land, one would imagine that there is much land yet to be secured, but such is not the case, as much of it is high, mountainous country, totally unsuitable for anything but grazing. There are, however, large areas of semi-arid land, in the many valleys, unproductive to-day for the want of irrigation, and if means can be devised for the raising, by some cheap method, of water from the Thompson rivers, these valleys could be made most productive. The soil or silt is rich and only requires water to make it a great revenue producer. In my last report I referred to the mighty powers lying dormant in the waters of Adams lake, and again reiterate my opinion that the department would do well to thoroughly investigate the marvellous possibilities there, for the benefit of the many settlers in the South Thompson valley, who are at present severely handicapped for the want of water.

The year 1912 promises to be a phenomenal one in railway construction throughout the province. The construction of the Canadian Northern Pacific railway, and the contemplated branch line of the said company from Kamloops to the Okanagan valley via Armstrong, and the proposed line of the Canadian Pacific railway from Red Deer, Alberta, to connect with the main line at Kamloops, via Yellowhead Pass, have brought this city and district prominently before the public, and in all probability Kamloops will become a wholesale distributing point and manufacturing centre, especially in view of the proposal of the city authorities to use the water of the Barrier river for power purposes.

The general inquiries, particularly in person, for land within the Shuswap, Upper Columbia and Lower Columbia divisions, part of my district, but held under reservation, have been exceedingly heavy, and the proposed reduction in the area to be granted under homestead entry would appear to be highly satisfactory to all except the interested squatters, many of whom, however, in view of their length of residence and improvements, made prior to the date of the general reservation, should receive special consideration for their claim to 160 acres.

The cities and towns throughout my district are growing rapidly and, being peopled by an industrious and optimistic class, are making wonderful progress, building operations showing great development, especially in the city of Kamloops.

The decision to complete the construction of the Kootenay Central railway down the Columbia valley from Cranbrook to Golden has caused a flutter in real estate in Golden, and in consequence of the railway development at this point, I have during the past year sold in the townsites of Golden, north and south, some ninety-nine lots, all sales carrying building conditions.

The homestead inspection work is steadily increasing and when the general reserve has been withdrawn, and the new regulations come into effect, I will undoubtedly require the services of a suitable and thoroughly competent man to assist in this important work.

The work of the agency is in excellent condition, and I cannot close this short report without making special mention of the hearty support and co-operation of each individual member of my staff.

Appended is a summary of the work performed at this agency during the fiscal year ending March 31, 1912.

Patent Branch—			
Homesteads	288	$ 2,880 00	
Improvements	54	1,539 00	
Land sales	52	8,765 33	
Townsite sales	53	2,407 67	
Searches, &c.	158	95 50	
Applications for patent	115	....	
Applications for inspection	71	....	
Entries cancelled	53	....	
			$15,687 50
Timber, Grazing, &c.—			
Bonus	3	$ 4,288 03	
Ground rent	92	6,871 74	
Royalty	49	25,602 56	
Timber permits	180	2,446 73	
Timber seizures	5	445 94	
Hay permits	14	41 92	
Grazing rents	349	7,200 44	
			$46,897 36
Mining Lands and Yukon Branch—			
Mining fees	21	$ 200 00	
Rental	19	678 80	
			$ 878 80
Total			$63,463 66
Total for previous year			41,089 35
Increase			$22,374 31
Letters received	10,806		
Letters written	9,578		

I am, sir,
Your obedient servant,

W. C. COWELL,
Agent of Dominion Lands.

No. 14.

REPORT OF THE AGENT AT LETHBRIDGE.

Department of the Interior,
Dominion Lands and Crown Timber Office,
Lethbridge, Alberta, April 9, 1912.

J. W. Greenway, Esq.,
Commissioner of Dominion Lands,
Ottawa, Ont.

Sir,—I have the honour to submit for your consideration this office annual report for the year ending March 31, 1912.

The business transacted this year while not so heavy as in previous years shows a considerable increase over that of last year. Very few homesteads have been granted in comparison to other years owing to the fact that homestead land within this district is practically exhausted.

Settlers are still pouring into this country, many of whom are in search of suitable land for farming purposes, and on May 1 next, three townships of land will be placed on the market.

In order to show the demand for this land I may state that at the present time there are in the neighbourhood of seventy-five persons lined up around the office. These parties intend remaining in line during this month in order to be first on hand on the opening morning.

A large number of applications for patent have been handled, and correspondence has also been quite heavy. The sub-agents and homestead inspectors deserve credit for the manner in which they have performed their departmental duties. The staff has worked faithfully, and is worthy of special mention.

I submit a list of the work performed during the past year:—

	Number.
Homesteads	568
Pre-emptions	160
Purchased homesteads	23
Improvements	175
Land sales	77
Pre-emption payments	1,137
Purchased homestead payments	132
Searches, &c	310
Applications for patent received	1,388
Entries cancelled	574
Sundries	1
Timber permits	125
Timber seizures	1
Hay permits	12
Grazing rentals	81
Letters received	30,090
Letters written	23,283
Number of staff	8

The total revenue collected for the fiscal year of 1911-12 through this office is $221,116.21, being an increase of $72,612.84 over the revenue of last year.

Owing to the wet weather during the harvest season of last year the crops did not yield what was expected, but with the moisture on hand at the present time, and early opening of spring, it is expected that this year will produce one of the largest crops raised in the west.

Your obedient servant,

J. W. STAFFORD,
Agent of Dominion Lands.

No. 15.

REPORT OF THE AGENT AT MEDICINE HAT.

Department of the Interior,
Dominion Lands and Crown Timber Office,
Medicine Hat, Alberta, April 3, 1912.

J. W. Greenway, Esq.,
Commissioner of Dominion Lands,
Ottawa, Ont.

Sir,—I have the honour to submit for your consideration the annual report of this office for the fiscal year ending March 31, 1912.

The business of this office has increased very much during the past year compared to the preceding one, as shown by the accompanying statement for 1910-11 and 1911-12.

The past year has not been as favourable for farming in this district as could be wished. It opened well under the very best conditions, the rains being plentiful in June, but the continual wet weather in August and September kept the crops growing so that they did not ripen before the frost had reduced the value of the crop from No. 1 Northern to No. 4 or feed grain.

The early frost and snow in September, October and November prevented farmers from stacking and threshing, and at the present time a large quantity of grain is still in stook waiting to be threshed.

The winter has been severe in this district, as it has been all over America and Europe. Stockmen have suffered some losses and the end is not yet as the feed has run short in places and the prairie grass did not cure as well as usual. Another drawback to the feed was that the snow thawed, formed ice on the prairie and the snow falling afterwards formed a crust that cattle could not break and the horses got thin pawing for the dry feed.

With these drawbacks we have not been worse off than other districts in this country and the United States. Our advices from intending settlers say that the winter has been an exceedingly hard one in Montana, North and South Dakota, Missouri, Idaho, Nebraska and other Western States.

From numerous inquiries from all the Northern States received at this office, asking for information, it looks as if there would be a larger immigration into this district the coming season. The class of settlers that arrived the last year was a very good one, both from Europe and the United States, and these settlers promise to make this country a prosperous and flourishing part of the Dominion of Canada.

The arrivals from the United States have already started to come in and a considerable number appear at this office from day to day to make application for homesteads and pre-emptions.

Railways are badly needed, many settlers being obliged to haul their produce as much as eighty and a hundred miles to market, but this season there are three lines to be constructed: the Canadian Pacific railway, Weyburn-Lethbridge branch, the Canadian Northern, and the Grand Trunk Pacific to Medicine Hat. These will afford relief to a large part of the district and to many settlers. The coming of the two latter roads to Medicine Hat promises to add to the prosperity of the city by bringing a number of new industries in, attracted by the abundant supply of cheap fuel in the shape of natural gas, besides giving adequate railway facilities for handling a large business.

The members of the office staff have given me most loyal support during my time in this office.

Your obedient servant,

GEO. H. MACDONELL,
Agent of Dominion Lands.

STATEMENT of the business transacted at the Medicine Hat Dominion Lands and Crown Timber Agency for the year ending March 31, 1912, and comparative statement for year ending March 31, 1911:—

—	1911.	1912.
	$ cts.	$ cts.
Patent Branch—		
Homestead fees	37,340 00	28,420 00
Pre-emption fees	26,110 00	18,010 00
Purchased homestead fees	920 00	1,210 00
Improvements	9,779 55	15,403 55
Land sales—cash	11,074 62	344,773 83
" scrip	....	640 00
Pre-emption payments	36,583 87	78,866 36
Purchased homestead payments	19,286 85	28,604 79
Searches, map sales, office fees, &c	59 25	80 00
Sundries—patent fee	30 00	....
Total	141,184 14	516,008 53
Timber, grazing and irrigation—		
Timber permits Grazing " } Forestry	293 45	201 90
" seizures	26 25	55 10
Hay permits	511 40	651 00
Grazing rentals—cash	7,085 92	13,641 15
" scrip	2,000 00	1,520 00
Sundries, registration irrigation fees	6 00	75 47
Total	9,923 02	16,089 52
Mining Lands and Yukon Branch—		
Mining fees	480 00	365 00
" quartz	....	5 00
Rental	520 00	2,655 12
Royalty	150 20	402 96
Total	2,130 20	3,428 08
School Lands Branch—		
General sales	....	5,957 82
Hay permits	123 60	125 55
Coal rental	....	40 00
Grazing permits	1,200 24	766 09
Mining fees	5 00	35 00
Total	1,328 84	6,924 46
Miscellaneous—		
Seed grain repayments	1,067 50	5,078 55
Grand total	155,633 70	547,584 24

No. 16.

REPORT OF THE AGENT AT MOOSEJAW.

Department of the Interior,
Dominion Lands and Crown Timber Office,
Moosejaw, Saskatchewan, April 4, 1912.

J. W. Greenway, Esq.,
Commissioner of Dominion Lands,
Ottawa, Ont.

Sir—In submitting my report of this agency for the fiscal year ending March 31, 1912, I beg to say that only having taken charge of this office on November 11 last, I am not in a position to make a very extensive report.

Upon comparing the present report with that of last year, you will notice a falling off in the number of entries. This, I think, is due principally to the fact that available land suitable for farming is fast becoming scarce. As an indication of this I might say that the majority of entries now being made are as the result of cancellation.

Owing to the large number of payments which became due on pre-emptions and purchased homesteads the revenue for the last year increased $103,169.37 over that of the previous year. It has been very difficult for a great many to meet these paymnts and there are at the present time a great many who are in arrears in this regard. The chief reason for this, I think, can be attributed to the fact that a large number have not been able to get their last year's crop threshed. It is reported from nearly every part of this district that a great many crops are still in stook. In other cases many of the settlers are storing their grain until such time as the railroad reaches this district. The action of the Department in discontinuing the accepting of applications for cancellation for non-payment of monies due relieved the settlers of a great deal of anxiety.

A marked increase has been noted in the number of applications received for coal mining leases, the majority of which applications cover lands situated forty or fifty miles south of this city. At the present time there are large mines which have been extensively equipped with machinery and which will be ready to start operation as soon as the railroad supplies them with proper facilities to market coal. This road, I understand, will be completed this season and will fill a long-felt want. I might say that the coal is of very good quality, being something similar to the Galt coal. From information received the present indications are that the time is not far distant when coal mining will be one of the chief industries in the southern part of this district.

Competition for land is very strong and it is no uncommon occurrence for numbers to sit at the office door anywhere from one to ten days in order to secure land coming open.

Numerous inquiries are received from intending settlers, and these are carefully answered and the fullest information regarding the district given. The number of applications for patent received has greatly increased and it has generally been found that the duties have been performed in a very satisfactory manner. Settlers performing their duties on land in the vicinity, being relieved of the necessity of building a $300 house, have been able to make application for patent whereas under the old ruling they would not have been in a position to do so financially.

The protection until April 1 afforded by the government was greatly appreciated and was taken advantage of by a great majority of the settlers in this district.

No complaints have been received of ill-attention or lack of courtesy on the part of any one on the staff, and a great deal of credit is due to them for the manner in which the work in general has been handled.

Your obedient servant,

G. K. SMITH,
Acting Agent of Dominion Lands.

Statement of the business transacted at the Moosejaw Dominion Lands and Crown Timber Agency for 12 months ending March, 1912:—

	Number.	Revenue.
Patent Branch—		
Homestead fees	4,087	$ 40,870 00
Pre-emption fees	2,225	22,250 00
Purchased homestead fees	199	1,990 00
Improvements	317	25,063 60
Land sales cash	29	1,262 31
Pre-emption payments	2,070	157,230 69
Purchased homestead payments	538	55,708 47
Searches, office fees, &c.	856	213 50
Applications for patent received	1,910	....
Applications for inspection received	2,192	....
Entries cancelled	3,419	....
Sundries—scrip	187	....
		$304,588 57
Timber, Grazing and Irrigation—		
Timber permits	1,769	$ 475 40
Hay permits	335	984 40
Grazing rentals cash	72	1,993 54
Sundries	16	18 95
		$3,472 29
Mining Lands and Yukon Branch—		
Mining fees	27	135 00
Rental	17	461 40
Royalty	16	228 75
Sundries—prospectors' fees	3	205 00
		$1,030 15
School Lands Branch—		
Hay permits	384	1,098 70
Grazing rentals	31	380 67
Coal rental	1	20 00
		$1,499 37
Miscellaneous—		
Seed grain and provision repayments	28	1,581 50
Grand Total		$312,171 88

General—

Letters received	69,415	....
Letters written	59,761	....
Salaries		$20,980 77
Disbursements		2,093 70

No. 17.

REPORT OF THE AGENT AT NEW WESTMINSTER.

Department of the Interior,
Dominion Lands and Crown Timber Office,
New Westminster, B.C., April 1, 1912.

The Commissioner of Dominion Lands,
Ottawa, Ont.

Sir,—I have the honour to submit the annual report of this agency for the fiscal year ending March 31, 1912.

During the past year we have been unable to deal with homestead entries in a general way, on account of the reservation covering the whole of this district, but in all cases where it was found, after inspection was made, that squatters were in possession of the land and the lands were available for homestead entry prior to the general reservation, entries have been granted.

In connection with the inspection work, I have visited nearly every settlement in the district and have travelled 5,812 miles by rail, boat and wagon and made 296 inspections during the year.

The total revenue of this Agency excluding some large payments made direct to the department, shows an increase of 100 per cent over the previous year. This is due largely to the activity in leases of lands where indications of coal have been found.

The general prosperity of this district which has been in evidence for some years, still continues and the present year is expected to surpass even the most optimistic anticipations.

Appended is a statement of the work performed at this agency:—

Homestead entries granted	33
Land sales	7
Townsite sales	28
Searches, &c	125
Applications for patent received	24
Applications for inspection received	7
Entries cancelled	6
Applications mining lands	50
Sand, stone and gravel permits	10
Letters received	2,622
Letters written	2,009
Total receipts	$14,536 98
Total revenue for year ending March 31, 1911	7,159 59
Increase	$ 7,377 39

Your obedient servant,

W. D. MAGEE,
Acting Agent of Dominion Lands.

No. 18.

REPORT OF THE AGENT AT PRINCE ALBERT.

Department of the Interior,
Dominion Lands and Crown Timber Office,
Prince Albert, Saskatchewan, June 10, 1912.

J. W. Greenway, Esq.,
Commissioner of Dominion Lands,
Ottawa, Ont.

Sir,—I have the honour to submit herewith for your consideration, the annual report of this office for the fiscal year ending March 31, 1912.

Schedule 'A.' gives a summary of the work performed and the revenue collected during the year, showing in the total the increase or decrease as compared with the previous year.

Schedule 'B.' shows the revenue collected in connection with the School Lands Branch of this agency.

The total revenue collected appears as $89,991.44 as against $80,170.78 for the previous year, being an increase of $9,820.66.

The number of homestead entries granted during the year just closed shows an increase over the previous year of 234.

The lumber manufactured under license during the year just closed shows as 77,469,595 feet, being an increase over the previous year of 43,524,790 feet B.M.

This is more than double the quantity of lumber manufactured during 1910-11.

The general office work in connection with this agency and sub-agencies tributary thereto, is in a satisfactory condition. The service rendered by the different members of the staff has been generally satisfactory.

A decided increase in the number of settlers going in for mixed farming is each year more in evidence. The land in the Prince Albert land district is particularly adapted for mixed farming. I anticipate a heavy increase of homestead entries during the coming year.

Hereto appended is a statement of the work transacted at this agency during the fiscal year ending March 31, 1912, as follows:—

Number of letters received	23,031
Number of letters written	29,118
Number of homestead entries	2,096
Total receipts	$89,991.44

I have the honour to be, sir
Your obedient servant,

W. S. McKECHNIE,
Agent of Dominion Lands and Crown Timber Agent.

SCHEDULE A.—DOMINION LANDS.

STATEMENT of the business transacted at the Prince Albert Dominion Lands and Crown Timber Agency for the year ending March 31, 1912, and comparative statements for former periods, as shown below.

—	Work and receipts for year ending March 31, 1912.			Corresponding period for previous year.			Increase as compared with previous year.			Decrease as compared with previou year.		
	No.	Amount.	Totals.	No.	Amount.	Totals.	No.	Amount.	Totals.	No.	Amount.	Totals.
Patent Branch.		$ cts.	$ cts.		$ cts.	$ cts.		$ cts.	$ cts.		$ cts.	$ cts.
Homestead fees	2,096	20,960 00		1,862	18,560 00		234	2,400 00				
Pre-emption fees	3	30 00		4	40 00					1		
Purchased homestead fees	5	50 00		9	90 00					4	40 00	
Improvements	165	3,894 50		166	3,464 97			429 53		1	10 00	
Land sales—cash	65	3,909 00		51	2,880 83		14	1,028 17				
" —scrip												
Pre-emption payments	18	1,963 05		17	614 54		1	1,348 51				
Purchased homestead payments	40	2,935 37		49	2,983 52					9	48 15	
Townsite sales, S.A.V.B.	68			39			29					
Searches, map sales, office fees, &c	116	32 05		117	47 60					1	15 55	
Applications for patent received	720			709			11					
Applications for inspection received	420			345			75					
Entries cancelled	743			532			211					
Sundries	2			3	1 60					1	1 60	
Dominion lands, total			33,773 97			28,683 06			5,206 21			115 30
Timber, Grazing and Irrigation.												
Bonus				1	1,400 00					1	1,400 00	
Ground rent	18	9,016 66		24	9,426 75					6	410 09	
Royalty on sales	22	23,457 40		22	21,245 79			2,211 61				
Timber permits and dues	1,574	12,995 14		1,298	8,941 71		276	4,053 43				
Timber seizures	49	5,322 25		42	4,854 60		7	467 65				
Hay permits and dues	301	838 40		170	533 95		131	304 45				
Grazing rentals—cash												
" " —scrip												
Irrigation fees												
Sundries	1	16 83					1	16 83				
Timber dues, &c., total			51,646 68			46,402 80			7,053 97			1,810 09

Mining Lands and Yukon Branch.												
Mining fees	21	68 00		169	749 00					148	681 00	
Rental	4	333 70		3	993 70					1	660 00	
Royalty												
Assessment payments	8	800 00					8	800 00				
Coal permits												
Sundries												
M. L. and Y. Branch, total			1,201 70			1,742 70			800 00			1,341 00
Forestry Branch.												
Timber permits	71	255 35					71 00					
Total			255 35									255 35
School Lands Branch.												
General sales				1	40 00					1	40 00	
Timber permits & dues	29	645 00		16	279 50		13	365 50				
Hay permits & dues	143	408 55		119	268 00		24	140 55				
Grazing rentals	23	193 73		22	194 85		1				1 12	
Mining fees seizures	2	1,065 00		2	1,630 30						565 30	
Coal rental												
" royalty												
" permits												
Cultivation permits												
Sundries				3	46 00					3	46 00	
School lands, total			2,312 28			2,458 65			506 05			652 42
Miscellaneous.												
Seed grain and provision repayments	24	801 46		22	883 57		2				82 11	
Sundries												
Miscellaneous, total			801 46			883 57						82 11
Grand total			89,991 44			80,170 78			13,821 58			4,000 92
General.												
Letters received	23,031			26,955						3,924		
Letters written	29,118			22,582			6,536					
Number of staff and salaries	average. 8,416	8,472 74		9	8,862 94						390 20	
Disbursements		1,224 62		99	939 52			285 10				
Total			9,697 36			9,802 46						105 10

W. S. McKECHNIE,
Agent of Dominion Lands and Crown Timber Agent.

SCHEDULE B.—Showing revenue from School Lands collected at Prince Albert Agency during Fiscal Year 1911-12.

Month.	Grazing Rentals.	Hay Permits.	Timber Permits.	Seizures.	Ground Rent.	Totals.
1911.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
April	51 05	122 85	31 50	10 00	....	215 40
May	....	21 50	....	1,055 00	....	1,076 50
June	12 80	189 50	....	....	....	202 30
July	6 40	48 30	....	....	....	54 70
August	....	24 20	....	....	....	24 20
September	....	1 00	....	....	....	1 00
October	....	....	....	....	....	....
November	6 40	20	69 25	....	....	75 85
December	12 80	20	202 75	....	25 00	240 75
1912.						
January	47 08	50	58 50	....	....	106 08
February	29 06	30	207 25	....	....	236 61
March	28 14	....	50 75	....	....	78 89
Totals	193 73	408 55	620 00	1,065 00	25 00	2,312 28

No. 19.

REPORT OF THE AGENT AT RED DEER.

DEPARTMENT OF THE INTERIOR,
DOMINION LANDS AND CROWN TIMBER OFFICE,
RED DEER, ALBERTA, April 13, 1912.

J. W. GREENWAY, Esq.,
Commissioner of Dominion Lands,
Ottawa, Ont.

SIR,—In submitting my annual report for the fiscal year ending the 31st ultimo, I am pleased to say that this district has made satisfactory progress during the past twelve months.

The summer of 1911 will long be remembered by the settlers as the worst ever experienced in Alberta. In the earlier months of summer the prospects for a bountiful harvest were very encouraging, and a much larger area was sown to crop than in any previous year. The summer was very cool and wet. The growth of all crops was, however, phenomenal, and had we been blest with our usual sunshine and warm weather, the yield would have been the largest ever harvested in Alberta, or I presume, in any part of the world, of an equal area. Harvesting was greatly retarded by wet weather and an unusually early frost did much damage to the grain, more so in some districts than in others, but generally throughout Alberta. However, as has been previously mentioned, the Red Deer District is largely devoted to mixed farming, and owing to the extensive railway construction being carried on a ready market was furnished for such grain as was harvested, and for all farm produce, for which the highest prices were obtained. Owing to inclement weather and the early freeze up, very little fall ploughing was accomplished. The succeeding winter, however, was one of the finest, being entirely free from storms, and on the whole, mild, so much so that cattle and horses came through with little or no feeding, and in prime condition. Owing to the mild winter the frost did not sink deep into the ground, consequently spring work has started at least two weeks earlier than was the case last year. There will not be as much wheat sown this year in the older and more settled portions of the district as much of the land will be summer-fallowed, but this will be made up by the increase of cultivation by new settlers. The ground is now in excellent condition for the grain, there being ample moisture, and should nothing unforeseen occur the Red Deer District will harvest a bumper crop next fall.

The butter and cheese factories throughout the district have largely increased their output during the past season, have realized good prices, and are in a flourishing condition. The town of Red Deer has made wonderful progress during the past year, and the brick yards, lumber and flour mills, and other industries have doubled their capacities. A customs office has been opened in the town which will be found a great convenience to the citizens and settlers in the neighbourhood.

The farmers of the Red Deer district are contented and happy in that every commodity they have to dispose of finds a ready market at good prices.

The merchants are happy and prosperous, as they can sell their wares at a fair profit for cash. The artisan is contented and happy as he can always find employment at wages commensurate with the cost of living, and is therefore able to support his family in comfort, but the man living on a salary, unless for a sympathetic employer, has nothing to make him either happy or contented, and I regret to say that, for this reason this office has been deprived of the services of a painstaking and efficient employee, in the person of Mr. T. M. Wright, whose resignation was forwarded you on the 2nd instant.

The revenue of this office has increased from $17,754.15 in 1900 to $91,296.28 this year, an increase of over 500 per cent, as is shown by the following summary:—

Patent Branch	$74,588 16
Timber, grazing and irrigation	895 50
Mining Lands and Yukon	13,104 19
School lands	2,176 32
Seed grain repayments	532 11
Total revenue	$91,296 28

Letters received	24,777
Letters written	23,193

I am, sir,
Your obedient servant,

W. H. COTTINGHAM,
Agent of Dominion Lands.

No. 20.

REPORT OF THE AGENT AT REGINA.

Department of the Interior,
Dominion Lands and Crown Timber Office.
Regina, Saskatchewan, April 2, 1912.

J. W. Greenway, Esq.,
Commissioner of Dominion Lands,
Ottawa, Ont.

Sir,—I have the honour to submit my report for the fiscal year ending March 31, 1912.

As was to be expected, there has been a considerable falling off of work in all lines in this office during the past year, owing to the small area of available lands and to the fact that a large proportion of the homesteaders in the district have received their patents.

The number of entries, however, does not by any means fairly represent the work performed.

As Regina is one of the oldest offices in the country, we have a large number of land seekers calling here for information regarding other parts of the country, and where the best land is obtainable.

We also have a large number of inquiries from the States and Eastern Canada for general information as to western conditions. These inquiries are dealt with and the parties in every case given the fullest possible information.

On account of the heavy crops last season and the early snowfall, some of the farmers have not been able to thresh their grain, and unless we have the most favourable weather, a lot of grain now in the stook will be a total loss.

The weather is ideal for this season of the year, and prospects appear to be good for the coming season.

Attached hereto is a comparative statement of receipts at this office for the years ending March 31, 1912, and March 31, 1911, respectively.

Your obedient servant,

J. R. GAYTON.
Agent of Dominion Lands.

Patent Branch—	1912.	1911.
Homestead fees	$ 3.400 00	$43.330 00
Pre-emption fees	130 00	190 00
Purchased homestead fees	110 00	100 00
Improvement payments	3,823 27	6.548 59
General sales	5,184 73	8.590 41
Pre-emption payments	3.796 20	411 48
Purchased homestead payments	6.774 77	3.623 34
Searches	134 50	151 24
Payments on colonization land	8.996 27	....
Total	$32,349 74	$23,945 06

	1912.	1911.
Timber, Grazing and Irrigation Branch—		
Timber permits..	$ 5 75	$ 38 00
Hay permits..	130 00	68 70
Sundries..	40	....
Total..	$ 136 95	$ 106 70
Mining Lands and Yukon Branch—		
Coal permits..	....	10 00
School Lands Branch—		
General sales..	$ 2.577 39	$ 1,037 38
Timber permits..	9 25	22 00
Hay permits..	934 85	728 25
Grazing rentals..	513 36	641 00
Cultivation permits..	3 00	....
Sundries..	13 90	....
Total..	$ 1.051 75	$ 2,428 63
Miscellaneous—		
See grain and provision payments.. ..	$ 954 07	$ 1,728 64
Disbursements—		
Salaries..	$ 5,459 59	$ 6,296 22
Contingent expenses..	463 17	492 62
Total..	$ 5,922 76	$ 6.788 84

No. 21.

REPORT OF THE AGENT AT SASKATOON.

Department of the Interior,
Dominion Lands and Crown Timber Office,
Saskatoon, Saskatchewan, April 12, 1912.

J. W. Greenway, Esq.,
Commissioner of Dominion Lands,
Ottawa, Ont.

Sir,—I have the honour to submit herewith my report of this office for the fiscal year ending March 31, 1912.

As will be seen from the appended summary, the volume of business shows a marked increase over the same period of last year, and indications point to still greater activity during the forthcoming twelve months.

While the available land in the near vicinity of Saskatoon is now practically all taken up, there is, nevertheless, a considerable area of homestead acreage open in this particular district, though at some little distance from this centre. This land is well adapted to mixed farming, and the experience of the farmers in many sections of the west during the past two years has been such that the settlers in this district are coming to realize the many advantages derived from this branch of agriculture, the result of which will undoubtedly be to much change the products raised at no distant date.

The year 1912 was a record one so far as yield is concerned in this district, and this, coupled with the great increase in the acreage sown to crop, resulted in a most remarkable volume of crop garnered.

The farmers were also fortunate in harvesting, threshing and marketing a considerable portion of their yield before the adverse conditions which affected many other districts were felt here, and the consequence was that only in a limited portion of the Saskatoon district was there any great loss from an unusually late harvest.

The class of homeseekers with which this office has done and is doing business promises well for the future of the agricultural interests in this particular section, a large percentage being well-to-do farmers from the American republic, with a generous sprinkling of experienced agriculturists from Great Britain and Germany, as well as a limited number from eastern Canada.

While an early winter prevented the usual volume of fall work, leaving much to be done in the way of preparatory labour for this year's seeding, the spring has opened most auspiciously in this section, and prospects are for an exceptionally good season and excellent yield for the harvest of 1912.

The extensive advertising which has been done by the city of Saskatoon, I find, has placed upon this office the duty of acting to a very great extent as an information bureau to an ever-increasing number of homeseekers, the result being that, while we have been called upon to respond to a very heavy stream of inquiries, much of the consequent business has necessarily found its way to many of the other district offices.

Splendid prices have prevailed during the year for all lines of farm produce, particularly in regard to what the farmer raises for the table, and the rapid growth of the towns and cities in this district has resulted in a market for the products of the mixed farmer that can scarcely be said to have beeen met by the agriculturists, while the prices obtainable for the same afford a most profitable return for the labour.

I have the honour to be, sir,
Your obedient servant,

M. A. MacINNES,
Agent of Dominion Lands.

STATEMENT of business transacted at the Saskatoon Dominion Lands Agency, for the year ending March 31, 1912.

Patent Branch—	Number.	Revenue.
Homestead entries	2,965	$29,630 00
Pre-emption entries	879	8,780 00
Purchased homestead entries	425	4,230 00
Improvements	307	21,672 87
Land sales (cash)	68	5,455 85
South African Volunteer bounty land scrip	112	....
Northwest Half-breed land scrip	8	....
Pre-emption payments	900	86,497 21
Purchased homestead payments	1,200	128,906 82
Searches	1,201	300 75
Sundries	3	6 25
		$285,479 75

Timber, Grazing and Irrigation—	Number.	Revenue.
Timber permits	34	28 75
Hay permits	288	699 40
Sundries	9	19 90
		$748 05
Mining Lands and Yukon Branch—		
Mining fees	7	35 00
Rental	4	1,020 00
Natural gas, sand and gravel	7	26 00
		$1,081 00
School Lands Branch—		
Hay permits	321	777 85
Timber permits	1	25
Grazing rentals	14	160 00
Sundries—excess hay	11	12 10
		$950 20
Miscellaneous—		
Seed grain collections	16	955 90
Total revenue		$289,214 90

Letters received	48,829
Letters written	51,158
Applications for inspection received	1,482
Applications for patent received	2,082
Entries cancelled	2,030

No. 22.

REPORT OF THE AGENT AT SWIFT CURRENT.

Department of the Interior,
Dominion Lands and Crown Timber Office,
Swift Current, Saskatchewan, April 2, 1912.

J. W. Greenway, Esq.,
Commissioner of Dominion Lands,
Ottawa, Ont.

Sir,—I have the honour to submit for your consideration the following report on the general work and conditions of this district for the past fiscal year:—

The recently closed year has been another prosperous one for the locality. Speaking of the district as a whole the crops were very good, the yield heavy, samples of grain good and the prices derived therefrom larger than in the majority of former years. In many instances loss was occasioned through hail, frost or dryness, but percentage of such was small.

The class of settlers in this district is of sound type, hailing, for the most part, from Great Britain and the United States. The majority are experienced farmers and come fairly well provided with machinery, stock and funds.

The seed grain distributed last season was greatly appreciated and few failed to take advantage of the offer of the government in this direction. At this point only two complaints were heard as to the quality of seed supplied and these cases were rectified by the Assistant Commissioner of Immigration, Mr. Gelly. The demand for seed grain for the approaching season appears to be less than in the spring of 1911, the explanation of this being due to the fact that the majority retained sufficient of last year's yield to supply seed for the present need.

During 1911 the Canadian Pacific railway constructed two branches running northwest and southeast. These lines traversed the older settled portions of the district, enabling a large amount of the grain to be shipped to an early market. This year it is the intention of the railway company to extend these two branches for a further distance of 50 or 60 miles, which, when completed, will afford transportation to most of the outlying points. Thriving little towns are appearing along the lines mentioned and before long elevators will be built, thereby giving a near market for grain grown this year.

The number of patents applied for has been very large. The evidence furnished in connection therewith tends to show that the older settlers have performed the requisite duties in a faithful manner.

The correspondence handled at this office has been extensive and the demand for literature and information very noticeable. Inquiries have been received from all quarters of the American continent and Europe.

The staff, including homestead inspectors and sub-agents, have worked carefully and well throughout the year and I cannot speak too highly of my assistants.

Accompanying this is a statement of the work attended to at this office during the twelve months ending March 31, 1912.

Respectfully submitted,

E. B. R. PRAGNELL,
Agent of Dominion Lands.

Statement of work at Dominion Land Office, Swift Current, during the twelve months ending March 31, 1912:—

Homestead entries	3,453
Pre-emption entries	1,828
Purchased homesteads	183
South African volunteer bounty scrip	175
Northwest Half-breed scrip	13
Red River scrip	1

The revenue from the various sources in this district was as follows:—

Homestead entries	$ 34,530 00
Pre-emption entries	18,280 00
Purchased homestead entries	1,830 00
Improvements	17,022 65
Land sales	16,602 36
Preemption payments	121,460 59
Purchased homesteads	45,953 79
Searches, &c	170 75
Sundries	2 56
Timber, grazing and irrigation	2,942 96

Mining Lands and Yukon Branch..	705 17
School Lands Branch..	1,298 87
Seed grain, &c..	1,761 87
	$262,560 93

In addition to the above there were 1,207 applications for patent received, and dealt with, also 1,670 applications for cancellation received, and 2,280 entries cancelled.

The number of letters received and written were 34,251 and 41,900 respectively.

No. 23.

REPORT OF THE AGENT AT WINNIPEG.

Department of the Interior,
Dominion Lands and Crown Timber Office,
Winnipeg, Manitoba, April 18, 1912.

J. W. Greenway, Esq.,
Commissioner of Dominion Lands,
Ottawa, Ont.

Sir,—I have the honour to submit herewith the report in connection with the Dominion Lands Office, Winnipeg, for the year ending March 31 last.

The attached summary shows the amount of revenue collected, and work performed under the different headings. In comparing this statement with that of the previous year, a considerable increase is shown. The opening up of new townships has increased the entries for homesteads, and also made the counter work much heavier. Information which I have received from different sources points to the fact that there is a large area of good agricultural land in the district covered by this agency, which has not as yet been opened for entry, but, as soon as it becomes available, will be entered for. This is shown by the large number of inquiries that are being received regarding these townships.

Intending settlers are given all the information at hand regarding the conditions of the country; this also applies to letters of inquiry, which are received in large numbers, literature and other information being sent in reply.

At the present time there are bright prospects for a prosperous year. Seeding has already begun and a feeling of hopefulness is abroad through the country.

Appended is a statement of the work performed and revenue received for the fiscal year.

Your obedient servant,

L. RANKIN,
Agent of Dominion Lands.

Land Branch—

Homestead entries..	2,097	$20,930 00	
Improvements..	132	5,256 18	
Land sales—cash..	63	13,274 96	
Townsite sales..	25	776 12	
Searches, maps, &c..	667	529 50	
Seed grain..	52	3,838 13	
			$44,604 89

Mines Branch—			
Mining fees	103	$ 609 91	
Rental	85	2,374 85	
Quarries	97	758 85	
Assessment payments	7	700 00	
Sale	1	57 50	
Sundries	39	117 00	
Petroleum	1	5 00	
			$ 4,623 11
			$49,228 00

Applications for patents received	367
Applications for inspections received	619
Entries cancelled	896
Letters received	19,480
Letters written	23,938

No. 24.

REPORT OF THE AGENT AT YORKTON.

Department of the Interior,
Dominion Lands and Crown Timber Office,
Yorkton, Saskatchewan, May 18, 1912.

The Commissioner of Dominion Lands,
Ottawa.

Sir,—I have the honour to submit herewith report of the transactions of this office for the year ending March 31, 1912.

There is a slight decrease in the number of homestead entries, and an increase in the total revenue. Crops in 1911 were good, but a considerable amount was lost owing to the early snow storm. Threshing operations were late, and very difficult, on account of snow. Prices were fair and business in general was good. Seeding this spring has been somewhat delayed owing to wet weather, but conditions look better at the present time although the acreage may be slightly less than last year.

The following is a summary of the work transacted:—

Homestead entries	1,266
Hay permits on Dominion Lands	106
Hay permits on School Lands	136
Applications for patent	1,628
Entries cancelled	533
Applications for inspection	577
Letters written	22,768
Letters received	23,077

Your obedient servant,

J. A. DUNCAN,
Agent of Dominion Lands.

No. 25.

REPORT OF THE MINING LANDS AND YUKON BRANCH.

Department of the Interior,
Ottawa, June 17, 1912.

W. W. Cory, Esq., C.M.G.,
Deputy Minister of the Interior,
Ottawa.

Sir,—I have the honour to submit herewith the report of the Mining Lands and Yukon Branch of the Department of the Interior for the fiscal year which ended on March 31, 1912.

The total revenue of this branch derived from all sources during the fiscal year amounts to $787,128.15. The statements lettered 'A.' and 'B.', showing in different forms how this amount is made up, will be found at the end of the report. Statement lettered 'A.' shows the total revenue for each month, and statement lettered 'B.' shows the revenue collected at each agency, including the Yukon Territory.

The revenue for the Yukon Territory, which amounts to $234,497.66, is shown separately in statement lettered 'C.'

The reports and statements for the fiscal year from the Commissioner, the Gold Commissioner, the Comptroller, the Crown Timber and Land Agent and the Director of Surveys at Dawson, and the Assistant Gold Commissioner at Whitehorse will be found under Numbers 25*a*. to 25*f*. of this report.

TIMBER IN THE YUKON TERRITORY.

The amount of dues collected on account of timber in the Yukon Territory during the fiscal year was $18,271.69. During the year 123 permits were issued, under the authority of which 50,000 feet B.M. of timber, and 1,149½ cords of wood were cut. The dues collected on permits issued amounted to $9,945.55.

There are in existence 108 timber berths held under license to cut timber within the territory, covering an area of 259·86 square miles, which licenses were granted prior to May 10, 1906, on which date the regulations governing the granting of licenses to cut such timber in the territory were rescinded, and regulations for the issue of permits to cut timber substituted therefor. Only one sawmill is now in operation within the territory.

According to the returns received in the department the number of feet, board measure, of lumber manufactured during the year was 534,449 and the quantity sold 909,449 feet. The number of cords of wood cut during the year was 11,491½ and the number sold 8,404. Seizure dues amounting to $974 were collected on cordwood cut in trespass. This does not include the very large amount of timber and cordwood cut free of dues for mining purposes.

MINING LANDS OTHER THAN COAL.

During the fiscal year 97 entries for quartz mining claims were granted by the agents of Dominion lands in Manitoba, Saskatchewan and Alberta.

In the Yukon Territory 41,599 placer mining claims, 10,605 quartz mining claims, and 79,017 renewals and relocations were recorded up to March 31, 1912.

According to the returns received during the fiscal year, 1,425 entries for placer mining claims, 219 entries for quartz mining claims, and 4,394 renewals and relocations were recorded during that period. The revenue collected from these sources and from fees for registering documents in connection with mining operations was $74,974.92.

ROYALTY ON GOLD MINED IN THE YUKON TERRITORY.

The total amount collected up to March 31, 1912, for royalty on the gross output of placer mining claims in the Yukon Territory, after deducting the exemption at one time allowed under the regulations, was $3,998,265.73, of which amount $100,606.29 was collected during the last fiscal year. For the purpose of estimating this royalty, the gold is valued at $15 an ounce, which is much below its real value.

The actual value of gold produced from placer mining operations in the Yukon Territory up to March 31 last might be safely placed at $120,271,333.

The following statement shows the agencies at which the royalty was collected and the amount collected at each during the year:—

Dawson..	$100,049 64
Whitehorse..	555 90
Fortymile..	75

The statement lettered 'E.' at the end of this report shows the total gold production, the total subject to royalty and the total royalty collected for each fiscal year from May 1, 1898, to March 31, 1912.

DREDGING.

Forty-five leases to dredge for minerals, other than coal, in the submerged beds of rivers in the Yukon Territory are now in force, covering a total frontage of 210·65 miles. The total revenue derived from this source up to March 31, 1912, amounts to $187,581.31, of which amount $2,860.96 was collected during the fiscal year.

These leases are confined to the Yukon, Stewart, McQuesten, Fortymile, Big Salmon, Klondike, Hootalinqua and Mayo rivers.

There are in operation in the Yukon Territory fourteen dredges, nearly all of which have an indicated capacity of 3,500 cubic yards in twenty-four hours. The Canadian Klondike Mining Company have installed on their property situated on the Klondike river, what is reported to be the largest gold-saving dredge operating in the world.

Twenty-eight leases to dredge for minerals in the beds of rivers in the provinces of Alberta and Saskatchewan are in force, covering a total frontage of 114·51 miles. Of these leases twenty-one are in the province of Alberta, and include 89 miles, seven are in the province of Saskatchewan, and include 35 miles in all, and three are in the Northwest Territories, embracing a frontage of 11 miles. The total revenue derived from this source up to March 31, 1912, amounts to $44,233.05, of which amount $1,160 was collected during the fiscal year.

HYDRAULIC MINING.

The regulations for the disposal of mining locations in the Yukon Territory to be worked by the hydraulic mining process were withdrawn by Order in Council, dated February 2, 1904, such withdrawal, however, not to affect leases already granted.

Ten hydraulic mining leases are still in force, covering a frontage of 28·73 miles. These leaseholds are all situated in the Yukon Territory. Since the regulations were first established in December, 1898, forty-seven hydraulic mining leases have been issued, all of which have now been cancelled with the exception of the above number.

Under the grouping provisions of the Placer Mining Act, operators can now acquire and group for operation a sufficient area to warrant the installation of efficient hydraulic machinery.

HOMESTEADS IN YUKON TERRITORY.

Thirty-three homestead entries in the Yukon Territory are now in force embracing a total area of 4,027·50 acres.

PETROLEUM.

By an Order in Council dated March 11, 1910, the regulations governing the reservation and sale of petroleum and natural gas rights the property of the Crown were rescinded, and regulations for the leasing of such rights were substituted therefor, and came into effect on May 2, 1910. These regulations provide for the issue of a lease to an applicant of the petroleum and natural gas rights under an area not exceeding 1,920 acres of adjoining lands. If the tract applied for is situated in unsurveyed territory, it must be staked out by the applicant in person. The term of the lease is twenty-one years, renewable for a further term of like duration, the rental for the first year being twenty-five cents an acre, and for each subsequent year, fifty cents an acre. The lessee must have satisfactory machinery on the land within one year from the date of the lease, and he must commence boring operations within fifteen months from such date. No royalty will be charged on the sales of the petroleum up to January 1, 1930.

There are now in force under these regulations 304 petroleum and natural gas leases, embracing a total area of 283,249·36 acres, distributed as follows: In the province of Alberta 302 leases, including 281,169·36 acres, and in the Province of Saskatchewan two leases, including 2,080 acres. The total revenue derived from petroleum lands during the year amounts to $50,286.15.

During the year four reservations have been renewed under the provisions of the late regulations to enable the several applicants to conduct petroleum prospecting operations on the tracts reserved for them. These reservations embrace a total approximate area of 7,360 acres, and evidence has been filed in the department to show that prospecting outfits have been installed, and that operations are being actively carried on upon these several tracts.

QUARRYING.

By an Order in Council dated May 13, 1910, regulations for the leasing and administration of Dominion lands containing limestone, granite, slate, marble, gypsum, marl, gravel, sand, or any building stone, were approved. These regulations came into effect on June 15, 1910. The maximum area which may be leased to an applicant is 40 acres, the term of the lease being twenty-one years, renewable at an annual rental of one dollar an acre. Personal application for a lease must be made and if the land is unsurveyed personal staking is necessary.

The number of leases now in force which were issued under the provisions of these regulations is 238, distributed as follows:—

In Manitoba—70 leases, containing an area of 2,247·42 acres.
In Saskatchewan—4 leases, containing an area of 113·46 acres.
In Alberta—90 leases, containing an area of 6,188.60 acres.
In Northwest Territories—15 leases, containing an area of 600 acres.
In British Columbia—59 leases, containing an area of 1,936·72 acres.

TAR-SANDS.

By an Order in Council dated February 14, 1910, regulations were approved for the disposal of tar-sand rights, the property of the Crown, in that portion of the Province of Alberta lying North of Township 80, and between the 4th and 5th initial meridians.

Under the provisions of these regulations six leases have been issued during the year, comprising a total area of 9,892 acres.

WATER RIGHTS.

There are now in force in the Yukon Territory 376 grants to divert water for mining purposes, aggregating a total of 89,092 miner's inches. During the fiscal year 23 water rights were issued, comprising 6,750 miner's inches.

Eleven leases have been issued to divert water for power purposes in the territory, including in all 60,200 miner's inches. The works in connection with two of these grants have been completed, and about 5,000 horse-power generated. Three of the grants have lapsed, and the works in connection with the remaining six are under construction.

COAL MINING LANDS.

The total amount collected during the year on account of coal mining lands sold under the provisions of the late regulations was $11,861.66, of which amount $11,790.51 was on account of coal lands in the province of Alberta, $11.15 on account of such lands in the province of Saskatchewan, and $60 in connection with coal lands in the Yukon Territory. The total amount collected on account of the sale of coal mining lands up to March 31, 1912, was $2,083,928.38.

The statement lettered 'D.' at the end of this report shows the revenue derived from the sale of coal lands for each fiscal year since 1896.

COAL LEASES.

The total number of coal mining leases in force at the close of the fiscal year was 690, including a total area of 403,013·66 acres, distributed as follows:—

In the province of Alberta—631 leases, embracing an area of 390,938·85 acres.

In the province of Saskatchewan—48 leases, comprising an area of 2,399·56 acres.

In the Railway Belt, British Columbia—8 leases embracing an area of 9,375·25 acres.

In the Yukon Territory—3 leases embracing an area of 400 acres.

The total number of leases of coal mining rights issued during the year was 233, comprising an area of 160,285·35 acres. The total revenue received during the year for rental of coal mining rights was $347,982.92.

The following is a statement showing the revenue collected in the western provinces and in the Yukon Territory on account of the sale of coal lands during the fiscal year, under the provisions of the late regulations:—

Province of Alberta	$11,790 51
Province of Saskatchewan	11 15
Yukon Territory	60 00
Total	$11,861 66

ROYALTY ON COAL.

The late regulations governing the sale of coal mining lands provided for the payment of a royalty of ten cents per ton of 2,000 pounds on the output of the mine. This regulation came into force on April 6, 1901, after which date all sales of coal mining rights were made subject to such regulation.

Under the regulations governing the issue of leases to mine coal, the royalty is fixed at 5 cents per ton of 2,000 pounds, on the merchantable output of the mine.

The following statement shows the amount collected on account of royalty during each year since the regulations came into effect:—

1901-2	Nil
1902-3	Nil
1903-4	$ 59 30
1904-5	2,979 70
1905-6	2,996 18
1906-7	4,456 80
1907-8	9,169 35
1908-9	6,052 23
1909-10	155,371 86
1910-11	221,246 12
1911-12	108,322 07

The total revenue derived from coal mining lands on account of purchase price, rental and royalty, during the fiscal year, amounted to $468,166.65.

The following is a statement of the office work performed during the year:—

Letters received and recorded	14,574
Letters sent	21,954
Pages of memoranda and schedule	9,996
Plans and sketches prepared	748
Accounts kept posted	9,050
Accounts rendered	9,355
Assignments accepted and registered	378
Returns examined and posted	1,796
Receipts issued	376
Refunds examined and prepared	258
Applications for coal locations received, covering an approximate area of 586,200 acres	759
New entries and renewals for mining locations granted in the western provinces and territories, not including the Yukon	235
Applications for stone, gypsum and clay	275
Applications for tar, asphalt and petroleum	452
Applications for quartz claims in Alberta, Saskatchewan and Manitoba	58
Applications for iron claims	5
Applications for placer mining claims in Alberta and Saskatchewan	168
Applications for dredging leases	59
Applications for homestead entry in the Yukon Territory	6
Homestead entries granted in the Yukon Territory	4
Placer mining grants, renewals and re-locations in the Yukon Territory	5,819
Quartz mining locations granted in Yukon Territory	219

Requisitions for patent prepared	153
Applications to purchase or lease lands in the Yukon Territory	36
Applications for water frontage	8
Agricultural leases in force in the Yukon Territory, comprising an area of 232·58 acres	24
Leases for water frontage issued	3
Water front leases in existence	26
Gold dredging leases issued	19
Coal mining leases issued	261
Timber licenses prepared	108
Stone quarrying leases issued	138
Prospecting reservations made under Section 18 of the Coal Mining Regulations, embracing an area of 33,430·48 acres	21
Prospecting reservations made under Section 34 of the Coal Mining Regulations, embracing an area of 3,680 acres.	4

I have the honour to be, sir,
Your obedient servant,

H. H. ROWATT,
Chief of Branch and Secretary of the Yukon.

REVENUE OF DOMINION LANDS INCLUDING THE YUKON TERRITORY.

A.—STATEMENT of Receipts on account of Coal and Minerals in the Provinces and Territories, also Timber, Hay, Coal, Hydraulic Mining, Dredging, Royalty on Gold, Mining Fees, Rental of Agricultural Lands, Water Power and Water Fronts, Survey Fees and Sale of Dominion Lands in the Yukon, for the Fiscal Year 1911 and 1912.

Month.	Quartz Acreage Sales.	Dominion Lands Sales.	Coal Sales.	Coal Mining.	Coal Royalty.	Coal Rental.	Rental Yukon.	Timber Dues, Yukon.	Mining Fees.	Hydraulic Leases.	Dredging Leases, N. W. T.	Dredging Leases, Yukon.	Gold Export Tax.
1911.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
April	....	102 41	3,443 70	300 00	26,492 28	16,463 76	1,690 47	1,127 00	3,035 38	....	....	250 00	....
May	....	....	372 90	360 00	12,997 92	25,236 68	5,948 34	886 82	3,785 25	1,528 39	356 00	....	6,269 68
June	829 38	233 30	85 41	250 00	6,735 05	7,857 73	14 81	3,633 31	4,736 75	10,150 00	....	100 00	14,437 27
July	175 18	....	3,277 30	580 00	3,744 73	30,307 36	150 22	913 69	5,552 00	....	....	....	16,043 73
August	498 30	229 71	2 45	315 00	4,194 09	27,317 52	714 35	540 79	9,834 13	580 50	650 00	165 00	17,879 13
September	166 76	22 55	349 95	365 00	3,944 15	30,637 49	517 87	1,459 50	8,308 86	315 62	....	....	18,143 83
October	98 50	73 55	63 70	420 00	3,835 90	49,999 68	2,047 01	1,369 43	7,011 00	875 00	....	....	22,009 17
November	826 17	....	....	475 00	2,882 73	38,143 77	4 00	4,488 13	3,138 00	1,383 00	....	200 00	4,161 57
December	....	....	2 51	715 00	2,584 59	21,638 86	85 46	502 75	5,116 50	....	....	300 00	1,462 74
1912.													
January	160 67	....	55 37	532 00	15,869 28	36,378 15	225 00	835 00	12,209 55	770 04	....	900 96	1 98
February	....	219 42	123 00	470 00	10,304 40	23,529 26	....	1,068 50	7,886 00	....	160 00	100 00	197 00
March	267 50	57 50	4,085 37	945 00	14,736 95	30,472 66	37 75	1,446 77	4,361 50	....	....	....	19
	3,022 46	938 44	11,861 66	5,727 00	108,322 07	347,982 92	1,435 28	18,271 69	74,974 92	15,602 55	1,160 00	2,860 96	100,606 29

REVENUE OF DOMINION LANDS INCLUDING THE YUKON TERRITORY.

A.—STATEMENT of Receipts on account of Coal and Minerals in the Provinces and Territories, also Timber, Hay, Coal, Hydraulic Mining, Dredging, Royalty on Gold, Mining Fees, Rental of Agricultural Lands, Water Power and Water Fronts, Survey Fees and Sale of Dominion Lands in the Yukon, &c.—*Concluded.*

Month.	Free Certificates Export of Gold.	Quarrying.	Map Sales Office and Registration Fees.	Homestead Fees.	Hay, Yukon.	Water Power, Yukon.	Tar-sands.	Sand, Stone and Gravel.	Petroleum	Gypsum.	Interim Receipt Account, Yukon.	Survey Fees.	Total.
1911.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
April	4 50	435 00						505 10	1,802 61	115 00	10 00		55,777 21
May	3 00	460 92	17 00		59 00		5 00	36 75	6,702 32	40 00	4 50		75,064 47
June	8 00	515 83	2 00	20 00	26 00		365 00	47 50	275 00				51,227 34
July	12 00	2,097 11	2 50		84 00		3,840 00	2 50	3,735 47	15 00			70,532 79
August	14 50	1,012 44	41 75				325 00	63 50	375 00	205 00			64,898 16
September	51 00	665 25	36 75					403 00	6,792 09				72,179 67
October	18 50	1,097 65	79 50			10 00		49 00	2,675 20				91,730 29
November	2 00	1,241 77	49 50			3,128 62	5 00	10 19	5,459 03		10 00		65,608 48
December	1 00	891 73	12 50			50 00	665 00	354 50	5,640 00			845 00	40,868 14
1912.													
January		1,258 35	1 00			7,500 00	2,885 00	97 22	973 50		62 00		80,715 07
February	2 00	348 81	5 00	10 00				142 50	7,081 84	10 90	125 00		51,783 63
March	2 00	1,320 62	8 50			1 00	20 00	3 00	8,774 09			200 00	66,742 90
	118 50	11,345 48	256 00	30 00	169 00	10,689 62	8,110 00	1,714 76	50,286 15	385 90	211 50	1,045 00	787,128 15

DOMINION LANDS REVENUE.

B.—STATEMENT showing the Total Amount of Revenue collected at each Agency, including the Yukon Territory, for the Fiscal Year ending March 31, 1912.

Revenue received at Head Office on account of the sale of coal lands in the Western Provinces, is, in the statement, credited to the several agencies in which the lands are situated.

Agency.	Quartz Acreage Sales.	Dominion Lands Sales.	Coal Sales.	Coal Mining.	Coal Royalty.	Coal Rental.	Rental, Yukon.	Timber dues, Yukon.	Mining Fees.	Hydraulic Leases.	Dredging Leases, N.W.T.	Dredging Leases, Yukon.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Battleford				5 00					168 00			
Brandon				5 00		160 00						
Banff				25 00	2,913 10	19,645 72						
Calgary			1,674 60	625 00	1,486 76	45,116 18			360 00			
Dauphin									308 50			
Edmonton			6,470 07	1,285 00	2,459 94	85,789 24			1,571 50		650 00	
Estevan			11 15	100 00	2,467 49	869 86			12 50			
Grande Prairie				5 00								
Kamloops				155 00		45 70						
Lethbridge			2,564 29	1,555 00	3,211 57	36,135 37			887 50			
Moosejaw				340 00	247 20	661 40						
Medicine Hat				365 00	523 21	2,534 87			5 00			
New Westminster				200 00		8,990 55						
Peace River												
Prince Albert									840 00		300 00	
Red Deer			1,081 55	662 00	1,289 41	10,542 28			366 00			
Swift Current				355 00	68 95	276 22						
Saskatoon				5 00		960 00						
Winnipeg		57 50							1,419 91			
Ottawa		151 39		35 00	93,264 44	136,135 28			1 00	12,153 04	210 00	936 77
Dawson Gold Commissioner's Office									57,485 50	3,449 51		1,919 19
Duncan Mining Recorder's Office									3,426 50			5 00
Sixtymile Mining Recorder's Office									2,357 50			
Whitehorse Assistant Gold Commissioner's Office									3,457 01			

DOMINION LANDS REVENUE.

B.—STATEMENT showing the Total Amount of Revenue collected at each Agency, including the Yukon Territory, for the Fiscal Year ending March 31, 1912—*Continued.*

Agency.	Quartz Acreage Sales.	Dominion Lands Sales.	Coal Sales.	Coal Mining.	Coal Royalty.	Coal Rental.	Rental, Yukon.	Timber dues, Yukon.	Mining Fees.	Hydraulic Leases.	Dredging Leases, N.W.T.	Dredging Leases, Yukon.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Conrad Mining Recorder's Office	267 50								1,107 50			
Kluane Mining Recorder's Office									1,201 00			
Dawson Royalty Collector's Office												
Dawson Crown Timber Office								17,397 94				
Whitehorse Crown Timber Office								873 75				
Dawson Comptroller's Office												
Whitehorse Royalty Collector's Office												
Whitehorse Comptroller's Office												
Fortymile Royalty Collector's Office												
Dawson Dominion Lands Office		50 00	60 00	5 00	390 00	120 25	6,451 49					
Dawson Mining Recorder's Office	139 10											
Whitehorse Dom. Lands Office		679 55					4,983 79					
Whitehorse Mining Recorder's Office	2,615 86											
	3,022 46	938 44	11,861 66	5,727 00	108,322 07	347,982 92	11,435 28	18,271 69	74,974 92	15,602 55	1,160 00	2,860 96

DOMINION LANDS REVENUE.

B.—STATEMENT showing the Total Amount of Revenue collected at each Agency, including the Yukon Territory, &c.—*Continued.*

Agency.	Gold Export Tax.	Free Certificates Export of Gold.	Quarrying	Map Sales, Office and Registration Fees.	Homestead Fees.	Hay, Yukon.	Water Power, Yukon.	Tar-Sands	Sand, Stone and Gravel.	Petroleum	Gypsum.	Survey and Office Fees.	Interim Receipt Account, Yukon.	Total.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Battleford			11 68						27 22					211 90
Brandon														165 00
Banff			352 87											22,936 69
Calgary				52 50					155 19	507 55				49,977 78
Dauphin														308 50
Edmonton			2,819 50	52 00				8,105 00	468 50	21,296 67				130,967 42
Estevan										55 00				3,516 00
Grande Prairie														5 00
Kamloops			488 10								190 00			878 80
Lethbridge			910 36						1 00	13,310 48				58,575 57
Moosejaw														1,248 60
Medicine Hat														3,428 08
New Westminster			1,236 99						788 00					11,215 54
Peace River								5 00		5 00				10 00
Prince Albert			43 70	7 50					10 50					1,201 70
Red Deer			25 00	44 00					15 50					14,025 74
Swift Current														700 17
Saskatoon			90 00						1 00	25 00				1,081 00
Winnipeg			2,702 85	5 00					247 85	5 00	185 00			4,623 11
Ottawa			2,664 43				10,639 62			15,081 45	10 90	25 00		271,308 32
Dawson Gold Commissioner's Office							50 00						211 50	63,115 70
Duncan Mining Recorder's Office														3,431 50
Sixtymile Mining Recorder's Office														2,357 50
Whitehorse Assistant Gold Commissioner's Office														3,457 01
Conrad Mining Recorder's Office														1,375 00

DOMINION LANDS REVENUE.

B.—STATEMENT showing the Total Amount of Revenue collected at each Agency, including the Yukon Tertitory, &c.—*Concluded.*

Agency.	Gold Export Tax.	Free Certificates Export of Gold.	Quarrying	Map Sales, Office and Registration Fees	Homestead Fees.	Hay, Yukon.	Water Power Fees.	Tar-Sands	Sand, Stone and Gravel.	Petroleum	Gypsum.	Survey and Office Fees.	Interim Receipt Account, Yukon.	Total.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Kluane Mining Recorder's Office	100,049 64													1,201 00
Dawson Royalty Collector's Office						169 00								100,049 64
Dawson Crown Timber Office														17,566 94
Whitehorse Crown Timber Office		111 00												873 75
Dawson Comptroller's Office	555 90													111 00
Whitehorse Royalty Collector's Office		7 50												555 90
Whitehorse Comptroller's Office	75													7 50
Fortymile Royalty Collector's Office				91 00	20 00									75
Dawson Dom. Lands Office												1,020 00		8,207 74
Dawson Mining Recorder's Office														139 10
Whitehorse Dom. Lands Office				4 00	10 00									5,677 34
Whitehorse Mining Recorder's Office														2,615 86
	100,606 29	118 50	11,345 48	256 90	30 00	169 00	10,689 62	8,110 00	1,714 76	50,286 15	385 90	1,045 00	211 50	787,128 15

REVENUE OF THE YUKON TERRITORY.

C.—Statement of Receipts from Timber, Hay, Coal, Hydraulic Mining, Dredging, Royalty on Gold, Mining Fees, Rental of Agricultural Lands, Water Fronts and Water Power, Survey Fees and the Sale of Dominion Lands for the Fiscal Year 1911 and 1912.

Month.	Quartz Acreage Sales.	Dominion Lands Sales.	Coal Sales.	Coal Mining.	Coal Royalty	Coal Rental.	Rental Yukon.	Timber Dues Yukon	Mining Fees.	Hydraulic Leases.	Dredging Leases Yukon.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
1911.											
April		102 41					1,690 47	1,127 00	2,865 38		250 00
May				5 00		40 00	5,948 34	886 82	3,674 25	1,528 39	
June	829 38	233 30					14 81	3,633 31	3,870 25	10,150 00	1,005 00
July	175 18				50 00		150 22	913 69	5,144 50		
August	498 30	229 71			140 00		714 35	540 79	8,984 13	580 50	105 00
September	166 76	22 55					517 87	1,459 50	7,338 50	315 62	
October	98 50	73 55	60 00		200 00	20 00	2,047 01	1,369 43	5,840 00	875 00	
November	826 17						4 00	4,488 13	2,873 00	1,383 00	200 00
December						60 25	85 46	502 75	4,861 50		300 00
1912.											
January	160 67						225 00	835 00	11,771 00	770 04	900 96
February		68 03						1,068 50	7,846 00		100 00
March	267 50						37 75	1,446 77	3,966 50		
Total	3,022 46	729 55	60 00	5 00	390 00	120 25	11,435 28	18,271 69	69,035 01	15,602 55	2,860 96

REVENUE OF THE YUKON TERRITORY

C.—Statement of Receipts from Timber, Hay, Coal, Hydraulic Mining, Dredging, Royalty on Gold, Mining Fees, Rental of Agricultural Lands, Water Fronts and Water Power, Survey Fees and the Sale of Dominion Lands, &c.—*Concluded.*

Month.	Gold Export Tax.	Free Certificates Export of Gold.	Map Sales, Office and Registration Fees.	Homestead Fees.	Hay, Yukon.	Water Power, Yukon.	Interim Receipt Account, Yukon.	Survey Fees.	Total.
1911.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
April		4 50					10 00		6,049 76
May	6,269 68	3 00	2 00		59 00		4 50		18,420 98
June	14,437 27	8 00	2 00	20 00	26 60				34,229 32
July	16,043 73	12 00			84 00				22,573 32
August	17,879 13	14 50	16 75						29,703 16
September	18,143 83	51 00	12 25						28,027 88
October	22,009 17	18 50	42 00			10 00			32,663 16
November	4,161 57	2 00	7 50			3,128 62	10 00		17,083 99
December	1,462 74	1 00	3 00			50 00		845 00	8,171 70
1912.									
January	1 98		1 00			7,500 00	62 00		22,227 65
February	197 00	2 00	5 00	10 00			125 00		9,421 53
March	19	2 00	3 50			1 00		200 00	5,925 21
Total	100,606 29	118 50	95 00	30 00	169 00	10,689 62	211 50	1,045 00	234,497 66

H. H. ROWATT,
Chief of Branch.

D.—STATEMENT showing the total Revenue derived from the sale of Coal Land for each Fiscal Year since 1896.

Fiscal Year.	Amount.	
	$	cts.
1896–1897	75	76
1897–1898	1,833	74
1898–1899	350	00
1899–1900	5,650	33
1900–1901	101,772	00
1901–1902	16,270	32
1902–1903	31,055	38
1903–1904	68,949	75
1904–1905	35,695	00
1905–1906	125,754	12
For the nine months ending March 31, 1907	335,795	97
1907–1908	346,813	23
1908–1909	276,186	86
1909–1910	377,445	86
1910–1911	191,257	23
1911–1912	11,861	66

H. H. ROWATT,
Chief of Branch.

E.—STATEMENT showing the total Gold Production, the total subject to Royalty and the total Royalty collected for each Fiscal Year from May 1, 1898, to March 31, 1912.

Fiscal Year.	Gold Production.		Subject to Royalty.		Royalty Collected.		Total Revenue.	
	$	cts.	$	cts.	$	cts.	$	cts.
1897-1898	3,072,773	20	2,732,928	20	273,292	82	273,292	82
1898-1899	7,582,283	02	5,882,626	00	588,262	37	589,943	52
1899-1900	9,809,464	64	7,307,720	00	730,771	99	733,041	04
1900-1901	9,162,082	79	7,231,416	17	592,660	98	596,368	03
1901-1902	9,566,340	52	8,367,225	88	331,436	79	331,532	04
1902-1903	12,113,015	34	12,113,015	34	302,893	48	302,893	48
1903-1904	10,790,663	12	10,790,663	12	272,217	96	272,217	96
1904-1905	8,222,053	91	8,222,053	91	206,760	87	206,760	87
1905-1906	6,540,007	09	6,540,007	09	163,963	25	163,963	25
1906-1907	3,304,791	05	3,304,791	05	82,622	42	82,622	42
1907-1908	2,820,161	60	2,820,161	60	70,504	65	70,504	65
1908-1909	3,260,282	80	3,260,282	80	81,507	07	81,507	07
1909-1910	3,594,251	20	3,594,251	20	89,844	10	89,844	10
1910-1911	4,126,727	60	4,126,727	60	103,168	19	103,168	19
1911-1912	4,024,236	75	4,024,236	75	100,606	29	100,606	29
Total	97,989,134	63	90,321,106	71	3,990,513	23	3,998,265	73

H. H. ROWATT,
Chief of Branch.

No. 25a.

REPORT OF THE COMMISSIONER OF THE YUKON TERRITORY.

Commissioner's Office, Yukon Territory,
Dawson, April 30, 1912.

W. W. Cory, Esq., C.M.G.,
Deputy Minister of the Interior,
Ottawa.

Sir,—I have the honour to report that during the fiscal year ending March 31, 1912, the amount of gold mined in the Yukon Territory upon which export tax was paid was 268,285·05 oz., which, valued at $15 per ounce for the purpose of taxation, amounted to $4,024,245.80, a decrease of 4,355·07 oz. from the amount mined during the year previous.

This decrease, I am informed, is accounted for by the fact that a number of producing mines were closed down pending the installation of more economical methods of mining.

The bulk of the gold is produced by dredging and hydraulic operations carried on by several corporations, they having acquired most of the gold-bearing areas that are known to contain gold in paying quantities.

As appears by the Report of the Gold Commissioner, some new discoveries of placer gold have been made during the year in the Stewart river, Sixtymile and other districts. Since my arrival in the territory, about a month ago, I have received very satisfactory reports from men prospecting in those new camps, and believe that with some improvement in transportation facilities to enable miners to take in supplies, a very material addition to the present area of placer gold-producing territory may be expected during the ensuing year.

Money was appropriated by the Yukon Council in June, 1910, to put a trunk road through one of the districts that has shown up so well this winter, and it is to be regretted that the late government did not see fit to have the road constructed, as it would have materially improved the overland highway through the territory and have proved the means of access to a large area of gold-bearing country, the development of which has been, thus, directly retarded.

A large number of quartz claims are being held and representation performed on them. No large amount of development work has been done within the year with the exception of that carried on in the vicinity of Carcross near the southern boundary, where considerable prospecting has been done on the properties of the British Yukon Gold Company.

In the past the attention of miners in the vicinity of the rich placers has been given almost exclusively to the mining of placer gold, producing rich returns for a comparatively small outlay.

A number of promising quartz prospects have been found in various parts of the territory, the development of which, along with the opening up of the recently discovered placer prospects, is of the utmost importance to the government, and should receive every reasonable assistance that can be rendered, as the continued prosperity of the territory depends almost entirely upon the establishment of paying quartz mines and the development of new placer diggings. From present indications there is every reasonable probability that both of these results will be accomplished.

As a number of vacancies existed in the Yukon Council, some constituencies being entirely unrepresented because of death, removals from the territory and resignations, and as the term of the then council would expire in June next, I deemed it advisable to dissolve the council in March and have issued the writs for a general election.

A session of the council will be held as soon as possible after election, and I confidently expect that the appropriations to be made by the council will be with a view to further encouraging and developing the mining industry in this country.

The reversal by the Railway Board of Canada of its order to the White Pass & Yukon Railway company, to reduce its freight rates 33⅓ per cent, has not had a tendency to encourage prospecting in this territory. Had the order been adhered to operations could have been carried on with much less expense, as a large percentage of the cost of mining consists of freight rates paid to that company on machinery and goods necessarily imported, it having practically a monopoly of the transportation business.

As the order to reduce rates was made by the board after a lengthy hearing of the case, its reversal of that order at the request of the railway company came as a surprise to the mine operators of this country. That the president of the transportation company suggested a voluntary reduction of rates in lieu of the order to reduce, is advanced by the board as a reason for its latest finding.

As yet no notice of any reduction has been received by shippers here. This is a matter of the utmost importance to all persons prospecting and mining in Yukon; in fact, to all inhabitants of the territory, as all lines of business are absolutely dependent upon mining.

From the time of the incorporation of the City of Dawson as a municipality revenue for local purposes, such as fire department, lighting of streets, building of sidewalks and water supply, has been raised by a rate imposed upon real estate, personal property and income.

Up to 1909 no persons in the employment of the Federal Government had been assessed on income, either salary or living allowance. In that year the Assessment Appeal Court ordered that all persons should be rated, including the judges of the Territorial Court.

The judges, on various pretences, objected to paying. All appealed but the assessment was confirmed. The principal ground taken by them was that their independence as judges was assailed, and that, in any event, their living allowance was a pure gratuity, and as such non-assessable.

In the autumn of 1910 Judge Dugas commenced an action in the Territorial Court attacking the assessment on nearly every conceivable ground. The trial was before Judge Craig (also an appellant) and Judge Macaulay (also an appellant) was a witness. On all the issues Judge Craig gave judgment in favour of Judge Dugas, and especially holding that the money voted by parliament as living allowance was a gratuity.

It was also held that an ordinance, known as the Plebiscite Ordinance, was *ultra vires* of the Yukon Council. This was the ordinance under which the commissioner of the territory had power to levy the rate under the Assessment Ordinance.

This threw matters into a chaotic condition and was an incentive to the people not to pay taxes. Judge Craig had previously taken the ground that living allowance was recoverable by law, which appears in the Auditor General's Report for the year 1903.

Judge Craig, on the 16th instant, commenced an action in the Territorial Court against the commissioner of this territory, and as well including the Territorial treasurer and tax collector and assessor, attacking the taxation. No point of attack is overlooked and he seeks, as well, to recover some taxes already paid. This will, if proceeded with, come for trial before Judge Macaulay.

It would seem difficult, if not impossible, now, to get an expression of opinion from the courts upon this question, as all of the judges have, by their actions, precluded themselves from giving an impartial opinion; not only in their own cases but in those of other employees of the government, or persons appealing from taxation.

The ground has been taken by the community generally that no good reason exists why all persons enjoying the usual privileges of a corporation, such as this is, should not contribute their proportion towards its maintenance.

I propose to take the judgment rendered by Craig, J., in favour of Dugas, J., to appeal, and in the meantime to endeavour to have such legislation enacted by the commissioner in council as may be required (if any), to prevent a continuance of such conditions.

I have the honour to be, sir,
Your obedient servant,

GEORGE BLACK,
Commissioner.

No. 25b.

REPORT OF THE COMPTROLLER.

Comptroller's Office,
Dawson, Y.T., April 9, 1912.

Honourable George Black,
Commissioner of the Yukon Territory,
Dawson, Y.T.

Sir,—I have the honour to submit the annual report of the Comptroller's office for the fiscal year ending March 31, 1912.

Under the appropriation through the Department of the Interior, 'Administration of the Yukon Territory,' the expenditure amounted to $138,067.12, as shown by the monthly statements and vouchers forwarded to the department.

The expenditure on account of the Department of Justice was $13,318.06, monthly returns being made to that department.

Under the letter of credit account, Department of Public Works, for the maintenance and repairs of public buildings in the Yukon Territory, the expenditure was $56,084.62.

The expenditure on account of the Department of Indian Affairs for the relief of sick and destitute Indians in the Yukon Territory was $7,544.53. This is an increase of about $1,500 over last year's expenditure, which is accounted for by the fact that, owing to the outbreak of smallpox in Dawson last summer, the Indians were not allowed to come to town during that period and were, therefore, unable to sell their bead-work, &c., and were thus cut off from their usual source of revenue.

As you are aware, there was a serious outbreak of smallpox among the Indians at Rampart House on the Porcupine River last summer. A telegram was received from J. D. Craig, of the Canadian Boundary Survey party, dated July 30, advising the administrator, Mr. Arthur Wilson, of the outbreak. The administrator wired the Deputy Minister, Department of Indian Affairs, and advice was received on August 25, that the officer commanding Mounted Police would honour drafts up to ten thousand dollars on this account. Of this amount $9,998.34 was expended on vouchers certified to by the administrator and comptroller, the balance being refunded by the police department to the Receiver General. A further credit of $5,000 was established in the name of the commissioner and comptroller on December 12, of which amount

$1,434.17 has been expended up to the end of the fiscal year. The doctor in charge advises that there were 98 cases in all; and in a letter dated March 1, he states that there were no further developments of cases since February 2.

The Royalty Export Tax collected in the territory for the year ending March 31 amounted to $100,606.29,—collected at Dawson, $100,049.64, Whitehorse, $555.90, and Fortymile 75 cents.

The revenue from free certificates issued to exporters of gold from Alaska was $118.50,—collected at Dawson $111, and Whitehorse $7.50.

The revenue collected in the Gold Commissioner's office on account of mining dues amounted to $68,878.80; and in the Crown Timber and Land Agent's office on account of Crown Timber, $17,566.94, and Dominion Lands, $8,217.74. The revenue from these various sources was deposited in the Dominion Revenue Trust Account in the Canadian Bank of Commerce, daily as received, and drafts purchased weekly in favour of the Receiver General and forwarded to the department. Weekly statements of these various sources of revenue, with the counterfoils, were checked in this office, and transmitted to the department; and monthly summaries were also checked and transmitted.

The revenue in the Registrar's office on account of land titles fees, for the year ending March 31, amounted to $1,066.05, which was deposited daily in the Dominion Revenue Trust account as received, and drafts purchased weekly in favour of the Receiver General and forwarded to the department. Monthly statements in duplicate were also checked in this office and forwarded to the department.

The revenue from the sale of Yukon Territorial Court law stamps amounted to $1,728.

I have the honour to be, sir,
Your obedient servant,

G. A. MacLEAN,
Comptroller.

No. 25c.

REPORT OF THE GOLD COMMISSIONER.

Office of the Gold Commissioner of the Yukon Territory,
Dawson, Y.T., April 12, 1912.

The Commissioner of the Yukon Territory,
Dawson, Y.T.

Sir,—I have the honour to submit herewith my report for the twelve months ending 31st ultimo, made up as follows:—

1. A financial statement in duplicate, giving the receipts of the Gold Commissioner's office during the fiscal year in question, together with the receipts collected at the offices of the mining recorders for the Duncan and Sixtymile mining districts, which were accounted for by the said mining recorders to this office during the fiscal year in question.

2. A statement in duplicate showing a recapitulation of the receipts for the fiscal year in question.

3. A comparative statement in duplicate with the receipts of the previous fiscal year which ended on March 31, 1911.

This statement shows an increase of $1,693.79 over the receipts of the previous fiscal year.

It will be seen from this statement that there is considerable increase from the receipts on account of placer mining grants, which is accounted for by the stampede which took place last spring on Britannia and Canadian creeks, in the Dawson mining district, and also by the stampede on Matson creek and some of its tributaries, in the Dawson mining district, which took place last December, January, February and March.

On the other hand there is a considerable decrease from the receipts on account of renewal placer mining grants, which is accounted for to a great extent by the fact that a large number of placer mining claims held by the Yukon Gold Company, which came due for renewal on January 1 last and which were allowed to revert to the Crown on that day, were relocated for the said company immediately after January 1 last, in claims of the sizes allowed by the Yukon Placer Mining Act, so as to reduce the number of grants from 243 to 51.

It will also be seen that the receipts on account of water rights and of quartz mineral claims have decreased materially, which is accounted for by the fact that on the old creeks there is very little occasion for the issuing of water rights at present, and that there is less interest taken in quartz mining claims in the Dawson mining district than during the previous years.

The mining operations in the various mining districts of the Yukon Territory have been the subject matter of reports from the various mining recorders for the said districts, and also from the mining inspector for Dawson mining district, and from the several agents to the mining recorders, except from the mining recorder for the Duncan mining district and from the agent to the mining recorder on Bonanza creek, who have not yet forwarded their reports for the year which ended on November 1 last. Duplicate copies of the various reports in question have been forwarded to the Department of the Interior under separate letters, when received, and as these various reports are too long to attach to this report, I will only give a short synopsis of their contents.

The mining operations of Canadian Klondyke Mining Company, Limited, on the Klondyke river and its tributaries during the last fiscal year, were on a larger scale than during the previous fiscal year, the two dredges of the company having been operated during the whole of last season.

The mining operations of Yukon Gold Mining Company on Bonanza and Hunker creeks and their tributaries during the last fiscal year were also on a much larger scale than during any of the previous years, owing to the addition of two new dredges to their fleet of dredges.

The Consolidated Dredging Company, Limited, operated also on one of their leaseholds on the Fortymile river during a portion of last summer.

On the other hand individual mining operations by ordinary placer mining methods or by hydraulicking, were carried on by a substantial number of people with satisfactory results on some of the old creeks, as well as on several of the new creeks in the Dawson Mining district, but not to the same extent as in the two previous years, owing to the fact that Mr. A. N. C. Treadgold has been acquiring a large number of placer mining claims on some of the old creeks for the several mining companies which he has organized in that connection and has been allowed to renew a large number of those claims with work done in connection with the developing of water power grants Nos. 5, 8 and 10.

Prospecting and development work was also carried on successfully on various other creeks in the Dawson mining district, namely, All Gold, Goring, Black Hills, Scroggie, Barker, Thistle, Henderson and others.

Development work in quartz mining claims in the Dawson mining district has not yet recovered from the blow which it received during the previous fiscal year by reason of the Dome Development Company, Limited, having failed to establish a mine on one of their claims. However, new efforts were made last summer towards developing the holdings of the 'Lone Star, Limited,' on Victoria Gulch, with the result that a two stamp mill was installed and put in operation last fall by Mr. E. H. Searle, and it is his intention to operate the mill in question during the present season.

The stampede on Britannia and Canadian creeks hereinabove mentioned, resulted in about twenty people wintering in the said locality this winter, and doing prospecting and development work thereon, the results of which remain yet to be established.

As regards the stampede on Matson creek and its tributaries, it remains yet to be established whether there is a paying streak on any of the said creeks, although some substantial pay has been located in a few places apart from Discovery Claim, and it will require considerable additional prospecting and development work to demonstrate whether the country will be a producer or not. A large number of the owners of claims in that locality propose to resume operations next fall, and there is no doubt that if there is any regular paystreak in that locality, it will then be located and determined.

In the Sixtymile mining district conditions have not materially changed from the previous year.

In the Duncan mining district mining operations were conducted on a larger scale than in any previous year on Highet creek, but on Haggart creek and Dublin gulch only three plants were operated last summer. A good deal of interest was taken in quartz mining claims at the head of Dublin gulch last summer, but it will require some more development work to establish the future of that locality. Neither The Yukon Basin Gold Dredging Company, Limited, nor The Stewart River Gold Dredging Company, Limited, were operating on their dredging leaseholds on the Stewart river and the McQuesten river nor on their placer mining claims along the McQuesten river during last summer; the dredge formerly owned by the said Yukon Basin Gold Dredging Company, Limited, was sold to some operators in Fairbanks, Alaska, and taken down there early last summer, whilst the other company is now in liquidation.

Your obedient servant,

F. X. GOSSELIN,
Gold Commissioner.

COMPARATIVE STATEMENT.

RETURNS Gold Commissioner's Office, Dawson, Y.T.

—	Year ending March 31, 1911.	Year ending March 30, 1912.	Increase, 1912.	Decrease, 1912.
	$ cts.	$ cts.	$ cts.	$ cts.
Placer grants	2,490 00	12,760 00	10,270 00	
Renewals	44,195 00	39,045 00		5,150 00
Relocations	4,170 00	3,120 00		1,050 00
Registered documents placer	4,061 00	4,835 00	774 00	
Abstracts placer	22 50	56 00	33 50	
Water rights	1,130 00	155 00		975 00
Water power	800 00			800 00
Hydraulics	3,199 59	3,449 51	249 92	
Dredging	345 54	1,919 19	1,573 65	
Drainage		5 00	5 00	
Quartz records	2,155 00	870 00		1,285 00
Quartz registered documents	1,024 50	292 50		732 00
Quartz certificate of work	2,652 50	2,062 50		590 00
Quartz certificate of partnership	120 00	55 00		65 00
Quartz lieu of assessment	100 00	100 00		
Quartz certificate of improvements	45 00	7 50		37 50
Quartz acreage	671 28	139 10		532 18
Quartz abstracts	3 10	7 50	4 40	
Totals	67,185 01	68,878 80	12,910 47	11,216 68
Net increase			1,693 79	

FINANCIAL Statement of the Gold Commissioner's Office from April 1, 1911, to March 30, 1912, Dawson, Y.T.

RECEIPTS.

Placer—		
To grants	$ 11,890 00	
Relocations	2,800 00	
Renewals	35,460 00	
Registered documents	4,476 00	
Abstracts	56 00	
		$ 54,682 00
Quartz—		
To records	545 00	
Certificate of work	1,877 50	
Certificate of partnership	30 00	
Certificate of improvements	7 50	
Registered documents	227 50	
Lieu of assessment	100 00	
Acreage	139 10	
Abstracts	7 50	
		2,934 10

Sundry accounts—		
To water rights	105 00	
Hydraulics	3,449 51	
Dredging	1,919 19	
		5,473 70
Duncan—		
To placer grants	370 00	
Placer relocations	170 00	
Placer renewals	2,037 50	
Placer registered documents	209 00	
Water rights	50 00	
Quartz records	325 00	
Certificates of work	175 00	
Registered documents	65 00	
Certificate of partnership	25 00	
Drainage grants	5 00	
		3,431 50
Sixtymile—		
To placer grants	500 00	
Placer relocations	150 00	
Placer renewals	1,547 50	
Placer registered documents	150 00	
Quartz certificate of work	10 00	
		2,357 50
		$ 68,878 80
Disbursements—		
By gold commissioner's suspense	2 50	
Gold commissioner's interim	32 00	
Dominion revenue trust account	12 00	
Comptroller	68,832 30	
		68,878 80
		$ 68,878 80

RECAPITULATION.

FINANCIAL STATEMENT Gold Commissioner's Office year ending March 30, 1912.

—	Placer Grants.	Relocation Grants.	Renewal Grants.	Registration documents placer.	Abstracts placer.	Water Rights.	Hydraulics.	Dredging.	Drainage.	Quartz Records.	Certificate works.	Certificate partnership.	Registration Documents quartz.	Certificate improvements.	Acreage.	Abstracts quartz.	Payment lieu assessment.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Dawson....	11,890	2,800	3,5460 00	4,476	56	105	3,449 51	1919 19	......	545	1,877 50	30	227 50	7 50	139 10	7 50	100
Duncan..........	370	170	2,037 50	209	......	50	....	....	5	325	175 00	25	65 00	.....	....	......	.....
Sixtymile	500	150	1,547 50	150	......	......	....	....	......	......	10 00	....	....	......	....	... .	.....
Totals........	1,2760	3,120	3,9045 00	4,835	56	155	3,449 51	1919 19	5	870	2,062 50	55	292 50	7 50	139 10	7 50	100

No. 25d.

REPORT OF THE CROWN TIMBER AND LAND AGENT.

Office of the Crown Timber and Land Agent
of the Yukon Territory,
Dawson, April 12, 1912.

The Commissioner of the Yukon Territory,
Dawson, Y.T.

Sir,—I have the honour to submit herewith my report of the business transacted in this office during the fiscal year ending 31st ultimo, in the following statements in duplicate, namely:—

1. A statement of the revenues collected from royalty on lumber cut on timber berths, dues paid in connection with timber permits, seizure dues on wood and lumber cut in trespass, and hay permits.

2. A statement of the revenue collected in the Dominion Lands Branch of this office from royalty on coal, sales of land, rentals of land, registration fees, survey fees, homestead entries and fees in connection with coal land.

These statements show an increase of $4,794.10 in the Timber Branch, and $1,239.68 in the Dominion Lands Branch, over the receipts for the previous fiscal year, which increases are accounted for partly by the payment of a long outstanding claim for $1,500 for seizure dues and of some royalty on operations covering more than one year, and also of some arrears of rental.

Only one sawmill was operated during the last fiscal year in the Dawson division of the Yukon Territory, namely, the Klondike Sawmill, situated on the island in the Klondike river at its mouth, owned by the North American Transportation & Trading Company, but operated by the Yukon Sawmill Company under a lease.

Three homestead entries were granted during the fiscal year.

The wood and timber cutting operations along the Lewes, Yukon, Stewart and Klondike rivers, and in the vicinity of Dawson, show about the same activity as in the previous years.

The various wood camps within a radius of about ten miles from Dawson were frequently visited by the Crown Timber Inspector during the last fiscal year, and were found to be operated under proper authority.

The wood camps along the Yukon river have not been visited for several months, but I am satisfied that they are being operated under proper authority.

Your obedient servant,

F. X. GOSSELIN,
Crown Timber and Land Agent.

CROWN TIMBER BRANCH.

—		Royalty.	Timber Permits.	Timber Seizures.	Hay Permits.	Totals.
		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
April	1911	175 25	837 25	39 50		1,052 00
May	"		585 82	266 00	59 00	910 82
June	"	1,149 49	895 82	1,588 00	26 00	3,659 31
July	"	103 50	652 69	107 50	84 00	947 69
August	"		506 54	34 25		540 79
September	"	441 00	828 50	75 00		1,344 50
October	"	342 50	954 93	72 00		1,369 43
November	"	1,763 63	2,714 50			4,478 13
December	"	12 50	293 00	83 00		388 50
January	1912	35 50	599 50	35 00		670 00
February	"		818 50			818 50
March	"	638 77	668 50	80 00		1,387 27
Totals		4,662 14	10,355 55	2380 25	169 00	1,7566 94

Total receipts 1910-1911	$12,772 84
" " 1911-1912	17,566 94
Net increase 1911-1912	4,794 10

CROWN LAND BRANCH.

—	Land Rentals.	Land Sales.	Office Fees.	Survey Fees.	Homesteads.	Application Coal Lands.	Rental Coal Lands.	Coal Royalty	Totals.
1911.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
April	1,664 01								1,664 01
May	3,089 84	2 00				5 00	40 00		3,136 84
June	14 81				10 00				24 81
July	150 22							50 00	200 22
August	664 35	50 00	14 75					140 00	869 10
September	493 04		12 25						505 29
October	127 01		42 00					200 00	369 01
November	4 00		7 50						11 50
December	85 46		3 00	820 00	10 00		60 25		978 71
1912.									
January	200 00		1 00						201 00
February			5 00		10 00				15 00
March	38 75		3 50	200 00					242 25
Totals	6,531 49	52 00	89 00	1,020 00	30 00	5 00	100 25	390 00	8,217 74

Total receipts, 1910-1911	$7,978 06
" 1911-1912	8,217 74
Net increase, 1911-1912	$1,239 68

No. 25e.

REPORT OF THE DIRECTOR OF SURVEYS.

Dawson, Y.T., April 1, 1912.

The Commissioner of the Yukon Territory,
Dawson, Y.T.

Sir,—I have the honour to submit the following report of the Yukon Survey Office for the fiscal year ending March 31, 1912.

Acting under the instructions of the Surveyor General dated April 3, 1911, I left Ottawa on May 1, and proceeded to Dawson to take charge of this office. I arrived on the night of May 17 and reported next morning to the Commissioner, who at once placed me in charge of the office.

The former Director of Surveys having retired on March 31, 1911, the staff had been directly under the charge of the Commissioner during the interval between that date and my arrival, and had been engaged in making tracings of plans required for the head office.

Immediately after my arrival the busy season commenced and the office has had a great amount of work to dispose of since.

Instructions were issued to H. G. Dickson, D.L.S., of Whitehorse, for the completion of the Carmack's-Jarvis river reference traverse, commenced in 1910, and to J. D. Craig, D.L.S., chief boundary surveyor, for the survey of a townsite at Rampart House on the Porcupine river.

Later, I organized a field party to complete a triangulation survey of the Klondike and North Fork (Klondike) watersheds, which had been partly completed some years previously.

Owing to the smallpox outbreak on the Porcupine Mr. Craig was unable to complete his survey. The other surveys were completed in good season.

In addition to these government surveys Mr. Dickson (who is in private practice at Whitehorse) has sent in returns of survey of 47 group lots; Mr. Gibbon, formerly of Dawson, has sent in returns of survey of one group lot; Mr. MacPherson, who is engaged with the Yukon Gold Company, has sent in returns of survey of enlargement of boundaries of 48 placer claims; and I have made for the public, through the administration, surveys of one town lot and 18 group lots.

All of these returns have been examined by me and approved by the Commissioner, except my returns of the triangulation survey, and of the survey of one group lot. These returns are now under preparation.

In addition to my own surveys mentioned, I spent a total of 18 days during the year in the field in looking up various locations of trails, base lines and lot posts, for the information of the territorial and gold offices.

Attached hereto is a schedule showing particulars of the surveys and returns mentioned.

OFFICE WORK.

In addition to the examination of the returns shown on the annexed schedule, and the preparation of my own returns, the work of the office has embraced such varied duties as waiting on the public, making blue prints, tracings, sketches, mounting maps, writing descriptions, correspondence, &c. The public require nearly all of one man's time.

A special work was the sorting over, examining, indexing and filing of all secondary plans, sketches and notes which had accumulated in the office.

The following list shows some of this work:—

Blue prints made	129
Tracings made	86
Sketches made	55
Descriptions written	21
Maps mounted	15
Secondary plans filed	610
Secondary notes filed	225

Revenue.

The revenue was derived from two sources: (1) From office work, consisting mainly of blue prints, done for the public, and (2) from field surveys made by myself for the public. It was as follows:—

1. Office revenue	$ 43 00
2. Field revenue	1,045 00
Total	$1,088 00

Correspondence.

The correspondence consisted of—

Letters received	148
Letters written	185
Total	333

Office Staff.

On my arrival the staff consisted of J. E. Deslauriers, draughtsman, and J. W. MacKay, clerk. On July 1 Mr. MacKay left on his holidays but did not return. He was replaced by T. J. Boond, draughtsman.

Owing to the amount of work which was in arrears, A. G. Macdonald, draughtsman, was added temporarily to the staff from September 1 to the end of the fiscal year, when he was retired.

Office Improvements.

The space devoted to the public in front of the counter was too cramped. Accordingly I had the government carpenter extend the counter across the full width of the main draughting room.

A drawing table for the use of the public was provided.

All drawing tables were surface dressed.

A locked cabinet was provided for drawing materials and a safe installed.

The lighting was overhauled and improved.

A new supply room in the attic was fitted up, and our own camp supplies, instruments and bulky stock stored therein.

The dark room in the basement has also been refitted.

With the addition of a small technical library, the Survey Office would be in excellent shape.

I have the honour to be, sir,
Your obedient servant,

F. H. KITTO, D.L.S.,
Director of Surveys.

SCHEDULE

Showing returns of surveys received from April 1, 1911, to March 31, 1912.

I.—GROUP LOTS.

Lot No.	Group.	Claimant.	Date of Survey.	Surveyor.	Area in Acres.	Approved by Commissioner.	Remarks.
228	2	Granville Power Co	1911	F. H. Kitto	10·00	Feb. 26, 1912	Power House lot.
295	2	Charles Fisher	"	"	1·60	"	Road House lot.
298	2	" "	"	"	160·00	"	Homestead.
321	2	Granville Power Co	"	"	51·65	"	Husky, M.C.
322	2	" "	"	"	"	"	Whiteside, M.C.
323	2	" "	"	"	"	"	Boyle, M.C.
324	2	" "	"	"	"	"	Kitto, M.C.
325	2	" "	"	"	"	"	Alexander, M.C.
326	2	" "	"	"	"	"	Granville, M.C.
333	2	" "	"	"	"	"	Morgan, M.C.
334	2	" "	"	"	"	"	Maggie, M.C.
335	2	" "	"	"	"	"	North Fork, M.C.
336	2	" "	"	"	"	"	Elma, M.C.
337	2	" "	"	"	"	"	White Channel John, M.C.
338	2	" "	"	"	"	"	Stella, M.C.
340	2	John Lee	"	"	22·30	Nov. 15, 1911	Three Star, M.C.
347	2	Malcolm McLaren	"	"	80·90	Mar. 20, 1912	Homestead.
484	2	N. L. P. & C. Co	1910	Jas. Gibbon	70·90	"	Right of way.
162	5	H. G. Dickson	1909	H. G. Dickson	43·39	Dec. 23, 1911	Spring Creek, M.C.
173	5	Carl Weik	1910	"	160·00	Aug. 19, 1911	Keewenaw, C.M.C.
174	5	"	"	"	51·65	"	Gladstone, M.C.
175	5	"	"	"	37·19	Dec. 7, 1911	Surface lot.
201	5	"	"	"	50·02	Aug 19, 1911	Northwest, M.C.
202	5	"	"	"	46·50	"	Poppy, M.C.
203	5	"	"	"	41·64	"	Leary, M.C.
204	5	"	"	"	50·06	"	Evening Star, M.C.
205	5	"	"	"	46·53	"	Monteray, M.C.
206	5	"	"	"	51·65	"	Star Ruby, M.C.
207	5	"	"	"	44·71	"	Wild Rose, M.C.
208	5	"	"	"	51·65	"	Big Four, M.C.
209	5	"	"	"	50·58	"	Alice, M.C.
210	5	"	"	"	50·90	"	Solo, M.C.
211	5	"	"	"	43·67	"	Brimstone, No. 1, M.C.

212	5	"	"	"	50·24	"	King Bee, M.C.
213	5	"	"	"	23·39	"	J. C., M.C.
214	5	"	"	"	44·62	"	Vivian, M.C.
215	5	"	"	"	33·76	"	White Pass, M.C.
216	5	"	"	"	38·02	"	Skagway, M.C.
217	5	"	"	"	40·45	"	Yukon, M.C.
218	5	"	"	"	24·94	"	Bismark, M.C.
219	5	"	"	"	51·65	"	Contact, M.C.
220	5	George Armstrong et al	"	"	39·98	"	Zelandian, M.C.
221	5	"	"	"	25·92	"	Rawhide, M.C.
222	5	J. O. Williams et al	1911	"	64·61	Nov. 23, 1911	May Copper, M.C.
223	5	"	"	"	23·89	"	Shamrock, M.C.
115	6	A. R. Auston et al	1910	"	51·65	Feb. 15, 1912	Utah, M.C.
116	6	"	"	"	51·08	"	Rambler, M.C.
117	6	"	"	"	45·38	"	Montana, M.C.
118	6	"	"	"	51·65	"	Colorado, M.C.
119	6	"	"	"	50·09	"	Texas, M C.
120	6	"	"	"	49·68	"	Reco, M.C.
15	10	John McMeekin	"	"	51·65	May 3, 1911	Bonanza, M.C.
16	10	"	"	"	160·00	"	County Antrim, C.C.
17	10	Karl Anderson	"	"	51·65	Dec. 7, 1911	Sunnyside, M.C.
19	10	John McMeekin	"	"	51·20	May 3, 1911	Eldorado, M.C.
20	10	"	"	"	43·81	"	Hazel May, M.C.
21	10	"	"	"	30·71	"	Leroi frac., M.C.
22	10	Seymour Rowlinson	"	"	10·49	July 11, 1911	Surface lot.
27	10	Thomas E. Bee et al	"	"	31·82	Dec. 26, 1911	North Star, M.C.
28	10	"	"	"	48·75	"	South Star, M.C.
29	10	"	"	"	15·33	"	Victoria, M.C.
30	10	John McMeekin	"	"	15·70	May 3, 1911	Star frac., M.C.
31	10	Tom E. Bee	"	"	9·93	July 11, 1911	Surface lot.
32	10	C. F. Mack	"	"	5·10	"	Surface lot.
3	15	Harry Chambers	1911	"	5·15	Dec. 9, 1911	Surface lot.

II.—PLACER CLAIMS.

Claim.	Creek.	Claimant.	Date of Survey.	Surveyor.	Approved by Commissioner.
29 below	Hunker	Syndicate Lyonnais	1911	C.W. MacPherson	Sept. 9, 1911
McGee Hillside	Bonanza	Dr. Thompson and Yukon Gold Co	"	"	Sept. 26, '11
Dickey Hillside	"	Yukon Gold Co	"	"	"
1 to 6 incl. below	"	"	"	"	"
1 and 2	Adams	"	"	"	"
McNamara bench	Bonanza	"	"	"	"
Miller bench	Adams	"	"	"	"
Brewster bench	Bonanza	"	"	"	"
17 to 28 incl. below	"	"	"	"	Sept. 28, '11
30 to 33 incl. below	"	"	"	"	"
1, 2 and 3	Magnet	"	"	"	"
1, 2, 3 and 4	American	"	"	"	"
1	Fox	"	"	"	"
3 and 4	Monte Cristo	"	"	"	"
Young bench	Fox	"	"	"	"
Eckert Hillside	"	"	"	"	"
Apenziller bench	"	"	"	"	"
Flloyd bench	Monte Cristo	"	"	"	"
Leonard bench	"	"	"	"	"
McKenzie frac. bench	"	"	"	"	"
Mosly hill	Bonanza	"	"	"	Oct. 5, 1911
Grill hill	"	"	"	"	"

III.—MISCELLANEOUS.

Survey.	Length in Miles.	Date of Survey.	Surveyor.	Approved by Commissioner	Remarks.
Portion of Dawson—Whitehorse road from Yukon Crossing to Whitehorse	150·00	1904	C.W. MacPherson	Aug. 23, 1911.	
Carmack's—Jarvis River Reference Traverse; 1911 portion	71·11	1911	H.G. Dickson	Feb. 20, 1912.	
Retracement of part of Base Line on Bonanza Creek	0·72	1911	C.W. MacPherson	Sep. 26, 1911.	Run in connection with placer surveys.

No. 25f.

REPORT OF THE ASSISTANT GOLD COMMISSIONER.

Office of the Assistant Gold Commissioner,
Whitehorse, Y.T., April 18, 1912.

George Black, Esq., K.C.,
Commissioner, Yukon,
Dawson, Y.T.

Sir,—I beg to submit the following report in relation to the Whitehorse Mining and Dominion Lands District for the fiscal year ending March 31, 1912. The district embraces the sub-mining districts of Conrad and Kluane, and tables Nos. 1, 2 and 3 show the total collections for the year from each of these respective divisions.

WHITEHORSE DISTRICT.

Beyond the performance of the annual assessment work there have been no operations of moment in connection with any of the quartz claims in this district during the past twelve months. The withdrawal of the Atlas Mining Company from their option on the 'Pueblo' group of claims, mentioned in my report for last year, appears to have had a most depressing effect, and since they withdrew no special effort towards development of any kind has been made. Happily this period of inaction now appears to be drawing to a close. The Atlas Mining Company has again beeen revived under the management of Mr. W. D. Greenough, who had charge of the work on the 'Pueblo' in 1910, and will shortly start work in probably two different places with strong working gangs. The company have recently secured favourable options on the 'Valerie,' 'Grafter,' 'Best Chance,' 'Pueblo,' 'Le Roi' and 'War Eagle,' all of which may be classed as among the most promising claims on the copper belt—indeed, with two or three exceptions, the only really promising properties on the range so far as surface showings go. Active operations will begin about the first of May, and it is confidently hoped that in a comparatively short time the extent and value of the camp will be amply demonstrated.

Placer mining has been somewhat quiet in the district during the year, the one possible exception being in the case of Nansen Creek, a tributary of the Nisling river situated about twenty-five miles west of Carmack's. There was quite a stampede early last summer and fairly good pay has been reported from one or two points on Nansen and its tributaries, and I believe the interest is still being maintained. This camp was formerly within the Whitehorse district, but was removed therefrom to the Dawson district late last year by order of the administrator. I cannot but believe that this was a mistake, in the interest of the miners concerned. Practically all their other business centres in Whitehorse and many of them have assured me that they would much prefer to have remained attached to this district. I believe they have even petitioned to have the change made. The distance is 132 miles from Whitehorse to Carmack's, while from Carmack's to Dawson is 198 miles, a difference of 66 miles in favour of the former.

There was also quite a stampede during last summer to Judith creek, situated at a point ten miles east of Lake Marsh, and striking in about the middle of the lake. Forty-two claims were recorded on this creek, but little or no effort at development has since been made, and nothing whatever has been produced. I have been told, however, that two or three miners are now prospecting on this creek. Judith creek can be reached much more easily from Carcross than any other point, and if it is found to produce gold such as would warrant further development it should be placed within the Conrad district.

On Livingstone creek and tributaries things have been unusually quiet throughout the year. The best and most easily worked of the old ground has been pretty well worked out, and general development appears to be in a sort of hesitant stage. However, the miners have absolute faith in the existence of gold in paying quantities at various points and more or less vigorous efforts are being made to locate it.

Smaller stampedes have been made to the country surrounding Aishihic lake and to one or two points on the Kaskawulsh river. Excellent 'prospects' can be found at both these points, but nothing of real value has yet been discovered. There are said to be extensive deposits of copper in the vicinity of Aishihic lake.

CONRAD DISTRICT.

The operations in this district, which are confined to quartz only, have mainly consisted in the work carried on by two concerns, those of the Yukon District Gold Mines, Limited, on the 'Big Thing' group of claims, and those of Mr. W. J. Fleming, on the 'Porter' group at Carbon Hill, Wheaton river. The former have completed a large working tunnel some three thousand feet long on the 900 foot level, to which several upraises have recently been added. Ore has been struck in one of these upraises about 550 feet from the surface, and this is now being blocked out. The vein has been shown to reach a size of 14 feet in places, while the values heretofore have been well maintained. The company have also installed a large power plant near the mouth of McDonald creek, some four miles from the workings, which they hope will enable them to carry forward the work of the mine with both greater efficiency and greater economy than heretofore.

Mr. Fleming on Carbon Hill has spent a good deal of money in the effort to locate ore at depth. He has still a small gang at work, and it is hoped that they will soon break into ore. There are numerous fine surface showings on this property, and if these are found at depth, there will be no question as to its great value. Mr. Fleming may install a mill for the treatment of his ore.

KLUANE DISTRICT.

This district appears to have made about the usual progress during the year, but I cannot give details as I have not as yet received a report from the recorder. However, I believe further fairly good pay has been struck on Burwash creek, while Fourth of July, Ruby and Gladstone creeks have produced about the usual quantity of gold. Messrs. Bingham and McKenzie are at present making a vigorous attempt to reach bed-rock on the 60's on Fourth of July, and as they are fitted up pretty well and are energetic, it is expected they will succeed. A good deal of pay has been taken in the past from a falsely supposed bedrock on this creek, but true bedrock has never been reached. Mr. Samson, who operated an hydraulic plant on Virgin creek, on the Kaskawulsh river, last year, has secured options on the best portion of Fourth of July, and expects to give the creek a thorough trial. The plant was moved last winter and will likely be ready for operations at an early date.

Your obedient servant,

R. C. MILLER,
Assistant Gold Commissioner.

TABLE No. 1.

STATEMENT showing the collections made in the office of the Assistant Gold Commissioner and of the Crown Timber and Dominion Lands Agent, Whitehorse, Y. T., during the fiscal Year, 1911-12.

Month.	Mining Dues.									Timber and Land Dues.			Export Tax, Gold.				
	Placer.				Quartz.												
	Grants.	Relocations.	Renewals.	Registered documents.	Grants.	Certificate of work.	Payment in Lieu.	Registered documents.	Acreage and Crown Grants.	Dominion Land Receipts.	Timber.	Dredging Leases.	Royalty.	Free Gold.	Game Licenses.	Total 1911-12.	Total 1910-11.
	$ cts.	$ cts.	$ cts.	$ cts	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
April	100 00	...	...	4 00	5 00	12 50	...	11 88	...	128 87	75 00	...	...	...	...	337 25	392 31
May	110 00	...	10 00	10 00	...	20 00	...	17 50	...	2,857 50	35 00	...	...	...	...	3,060 00	2,864 00
June	260 00	...	70 00	28 00	...	172 50	...	200 00	829 38	245 30	...	...	23 00	...	...	1,828 18	1,010 27
July	420 00	...	70 00	24 00	15 00	37 50	100 00	22 50	175 18	...	50 00	...	161 30	50	200 00	1,275 98	945 96
August	390 00	...	310 00	101 00	...	10 00	100 00	28 13	385 00	231 71	...	...	144 01	1 00	200 00	1,900 85	1,979 80
September	170 00	10 00	20 00	6 00	...	15 00	100 00	20 00	166 76	47 38	115 00	...	14 75	1 50	300 00	986 39	748 07
October	50 00	...	100 00	8 00	10 00	22 50	...	15 00	98 50	73 55	...	2,000 00	184 74	4 50	...	2,566 79	1,114 83
November	...	.	...	15 00	10 00	12 50	...	57 50	800 37	...	10 00	...	...	...	...	905 37	654 89
December	...	10 00	10 00	...	...	5 00	...	12 50	...	...	114 25	...	1 00	...	...	152 75	355 75
January	...	...	...	17 00	10 00	5 00	...	10 00	160 67	25 00	165 00	...	1 75	...	...	394 42	177 50
February	...	...	...	8 00	...	22 50	...	18 00	...	68 03	250 00	...	25 35	...	...	391 88	527 50
March	...	...	...	6 00	...	2 50	...	19 50	...	...	59 50	...	...	...	...	87 50	422 47
Totals	1,500 00	20 00	590 00	227 00	50 00	337 50	300 00	432 51	2,615 86	3,677 34	873 75	2,000 00	555 90	7 50	700 00	13,887 36	11,193 35
Number of Receipts	150	2	37	77	10	79	3	88	74	20	20	4	38	12	7	619	555

TABLE No. 2.

STATEMENT showing the collections made in the office of the Mining Recorder for the Conrad District during the Fiscal Year 1911-12.

Months.	QUARTZ MINING DUES.							Totals,	Totals,
	Grants.	Certificate of work.	Certificate of partnership.	Payment in Lieu.	Registered documents.	Acreage & Crown Grants.	Water Grants.	1811-12.	1910-11.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
April	10 00	5 00	....	....	....	....	....	15 00	7 50
May	15 00	30 00	2 50	....	27 50	....	....	75 00	52 50
June	20 00	17 50	5 00	....		....	....	42 50	155 00
July	50 00	32 50	2 50	....	10 00	....	....	95 00	72 50
August	25 00	130 00	....	100 00	7 50	....	....	262 50	330 00
September	55 00	57 50	....	200 00	25 00	....	....	337 50	105 00
October	....	15 00	....	....	7 50	....	....	22 50	37 50
November	....	2 50	2 50	100 00	5 00	....	50 00	160 00	35 00
December	20 00	....	....	....	25 00	....	....	45 00	10 00
January	....	....	....	....	5 00	....	....	5 00	5 00
February	....	5 00	....	....	2 50	307 50	....	315 00	2 50
March	....	....	....	....	2 50	56 65	....	59 15	15 00
Totals	195 00	295 00	12 50	400 00	117 50	364 15	50 00	1,434 15	827 50
Receipts	39	118	5	4	34	18	1	219	318

TABLE No. 3.

STATEMENT showing the collections made in the office of the Mining Recorder for the Kluane District during the eleven months ending February 29, 1912.

Month.	Placer Mining Dues.			Quartz Mining Dues.			Totals.	Totals
	Relocations.	Renewals.	Registered Documents.	Grants.	Certificate of Work.	Registered Documents.	1911-12.	1910-11.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
April	20 00	20 00	70 00	....	....	2 50	112 50	68 50
May	40 60	50 00	....	....	....	....	90 00	79 00
June	....	40 00	5 00	....	....	....	45 00	80 00
July	....	160 00	2 00	....	....	....	162 00	275 50
August	20 00	50 00	2 00	5 00	2 50	....	79 50	450 00
September	30 00	190 00	....	5 00	....	....	225 00	283 00
October	....	10 00	....	....	....	....	10 00	90 00
November	....	....	4 00	....	....	....	4 00	47 50
December	....	140 00	....	....	40 00	....	180 00	150 00
January	10 00	80 00	....	....	20 00	....	110 00	144 00
February	20 00	....	....	....	....	....	20 00	101 00
March	....	....	....	....	....	....	....	62 00
Totals	140 00	740 00	83 00	10 00	26 50	2 50	1,038 00	1,830 50
Receipts	14	74	41	2	18	1	150	204

No. 26.

REPORT OF THE TIMBER AND GRAZING BRANCH.

Department of the Interior,
Ottawa, July 22, 1912.

W. W. Cory, Esq., C.M.G.,
Deputy Minister of the Interior,
Ottawa.

Sir,—I have the honour to submit herewith the report of the Timber and Grazing Branch for the fiscal year ending March 31, 1912.

The revenue derived from timber, grazing lands and hay lands for the year amounted to $486,227.21, being an increase of $27,011.17 over the previous year.

At the end of this report will be found statement 'A.,' which sets out the total revenue of the branch from its various sources for the year, and statement 'B.,' showing the timber revenue by agencies.

Reports from the Crown Timber Agents at Calgary, Edmonton, Prince Albert, Winnipeg, New Westminster and Kamloops, setting out the revenue collected on Dominion Lands within their respective agencies, and other information, are appended hereto. The report of the Inspector of Crown Timber Agencies above mentioned, together with the ruling price of lumber, the number of mills operated on berths held under license, and the number of portable sawmills in operation, may be summarized as follows:—

Agency.	Total Revenue.	Average price of lumber per M ft. B. M. at mills.	No. of mills operating under license.	No. of portable mills in operation.
	$ cts.	$ cts.		
Calgary	28,091 88	16 01	15	18
Edmonton	83,254 50	17 00	18	33
Prince Albert	52,989 29	19 45	20	23
Winnipeg	94,869 95	16 28	29	33
New Westminster	59,412 71	14 50	7	Nil
Kamloops	48,162 98	14 63	8	Nil

The returns of operations received show the following quantities of building material as having been manufactured and sold under government license during the year in the timber agencies above referred to:—

	Manufactured	Sold.
Sawn lumber, ft. B.M.	240,863,681	200,232,482
Shingles	85,000	85,000
Shingle bolts, cords	11,093	11,093
Railway ties	360,801	390.183
Laths	18,343,253	13,931,903

The following material was manufactured and sold on permit berths and portable sawmill berths:—

	M'factured.	Sold.
Sawn lumber, ft. B.M.	36,711,956	21,041,731
Railway ties	138,647	129,628

The quantity of lumber manufactured and sold within each agency will be found in the agents' reports appended hereto.

The areas of timber lands held under license and permit in the provinces of Manitoba, Saskatchewan and Alberta, and in the railway belt in the province of British Columbia, on March 31, 1912, were as follows:—

	Under License.	Under Permit.
	Sq. Miles.	Sq. Miles.
Manitoba	1,234.51	364.80
Alberta	2,173.98	39.87
Saskatchewan	2,146.63	310.02
British Columbia	1,791·76	4.57
Total	7,346.88	719.26

Of the area shown above as held under permit, 24·88 square miles are covered by portable sawmill permits issued on berths of one square mile and under, 22·75 square miles by cordwood permits covering one quarter-section, and 148·09 square miles by permits to cut fire-killed timber.

During the year 109 timber berths were granted, of which 34 were portable sawmill berths, 43 cordwood berths, 16 license berths, and 16 berths covering fire-killed timber.

GRAZING LANDS.

The granting of grazing leases is confined to the southern portion of the province of Alberta, the southwestern portion of the province of Saskatchewan, and the Kamloops division of the railway belt in the province of British Columbia. Leases are granted for such lands only as are reported by the inspector of ranches, after inspection, as unfit for agricultural purposes. There are in force 1,424 grazing leases, which include a number of leases issued prior to the granting of leases being restricted to the above described districts. These leases cover a total area of 3,554,297 acres, located as follows:—

	Acres.
Manitoba	945
Saskatchewan	1,145,966
Alberta	2,001,234
Railway belt, B.C.	406,152
Total	3,554,297

OFFICE WORK.

The following is a partial statement of the office work performed at Ottawa during the fiscal year:—

Letters received and recorded (including those pertaining to irrigation)	25,754
Letters sent (exclusive of those pertaining to irrigation)	26,563
Plans and sketches prepared	3,884
Cash receipts issued in quadruplicate	1,586
Timber and grazing assignments registered	141
Berths applied for	327
License berths granted	16
Portable sawmill berths granted	34
Cordwood berths granted	43
Fire-killed permit berths granted	16
Licenses for timber berths prepared in duplicate	689
Instructions issued for survey of timber berths	22
Returns of survey of timber berths examined and re-examined	49
Returns of operating sawmills verified and posted	2,979
Timber permits checked and entered	11,474
Ledger accounts kept posted	906
Seizures checked and entered	300
Fire-guarding accounts posted	741
Applications for grazing lands received	848
Grazing leases issued	348
Applications for hay lands received	67
Ledger accounts kept posted (hay)	4
Ledger accounts kept posted (grazing)	1,424
Hay permits checked and entered	3,437

I have the honour to be, sir,
Your obedient servant,

B. L. YORK,
Chief of Branch.

A.—STATEMENT of Revenue for Fiscal Year 1911-12.

—	Timber.	Grazing.	Hay.	Fire Tax.	Registration Fees.	Total.
1911.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
April	57,892 53	5,153 23	2,768 15	3,844 21	2 00	69,660 12
May	61,002 58	5,517 39	1,302 05	2,112 27	44 74	69,979 03
June	13,650 02	6,402 99	2,166 30	2,672 61	....	24,891 92
July	34,783 82	4,429 82	2,183 97	49 66	....	41,447 27
August	36,787 67	5,842 80	804 45	152 70	40 82	43,628 44
September	11,251 53	6,004 29	141 60	100 52	....	17,497 94
October	40,827 54	8,088 78	77 65	343 80	40 82	49,378 59
November	19,313 74	7,419 69	45 50	181 45	8 50	26,968 88
December	18,379 75	3,957 87	7 60	147 81	2 00	22,494 43
1912.						
January	34,982 85	5,345 66	229 15	357 32	....	40,914 98
February	28,842 45	7,015 92	11 00	1,729 02	19 74	37,618 13
March	24,682 44	5,860 97	17 40	11,164 80	21 87	41,747 48
	382,396 92	71,039 41	9,754 22	22,856 17	180 49	486,227 21

B.—STATEMENT of Timber Revenue for Fiscal Year 1911-12.

Agency.	Bonus Under License.	Ground Rent Under License.	Royalty Under License.	Permit Fees, Dues and Rental.	Seizures and Fines.	Total.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Battleford				378 65		378 65
" collected at head office.				25		25
Brandon				352 64	66 00	418 64
" collected at head office.				25	78 00	78 25
Calgary		5,015 91	6,455 75	3,852 52	3,252 44	18,576 62
" collected at head office.		1,067 21				1,067 21
Dauphin				8,580 44	2,000 70	10,581 14
" collected at head office.				50	5 00	5 50
Edmonton	5,262 06	3,026 69	9,944 68	55,476 99	2,260 15	75,970 57
" collected at head office		5,476 82			100 00	5,576 82
Estevan				129 95		129 95
" collected at head office.						
Grande Prairie				5 50		5 50
Grouard				152 65		152 65
Humboldt				65 25	14 50	79 75
Kamloops	4,288 03	6,823 74	25,602 56	2,446 73	445 94	39,607 00
" collected at head office.		312 76	202 71			515 47
Lethbridge				211 00	5 00	216 00
" collected at head office.						
Medicine Hat				214 90		214 90
" collected at head office.						
Moosejaw				485 05		485 05
" collected at head office.				50		50
New Westminster	3,866 43	22,435 11	14,346 98	13,059 25	4,744 06	58,481 83
" collected at head office.		849 80			102 50	952 30
Prince Albert		9,016 66	22,631 56	11,551 75	7,833 33	51,033 30
" collected at head office		864 79	222 22	25		1,087 26
Red Deer				258 60	53 05	311 65
Regina				5 75		5 75
" collected at head office.						
Saskatoon				28 75		28 75
" collected at head office.						
Swift Current				226 25		226 25
" collected at head office.						
Winnipeg	8,142 47	10,684 58	25,753 56	37,970 18	9,635 67	92,186 46
" collected at head office.		503 25	940 61		400 00	1,843 86
Yorkton				396 80	13 00	409 80
" collected at head office.				50 50		50 50
Revelstoke	1,896 43	4,080 16	15,421 93	113 25	236 52	21,748 29
" collected at head office.		50				50
	23,455 42	70,157 98	121,522 56	136,015 10	31,245 86	382,396 92

C.—STATEMENT of Revenue of Grazing, Hay, Fire Tax, Registration Fees, year 1911-12.

Agency.	Grazing.	Hay.	Fire Tax.	Registration Fees.	Total.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Battleford	5 26	771 65			776 91
" collected at head office	5 26	2 00			7 26
Brandon	3 20	181 00			184 20
" collected at head office					
Calgary	3,303 40	311 00			3,614 40
" collected at head office	4,833 65				4,833 65
Dauphin		287 65			287 65
" collected at head office	3 20	6 00			9 20
Edmonton		1,648 50		48 61	1,697 11
" collected at head office		10 00			10 00
Estevan	98 91	357 60			456 51
" collected at head office	612 82				612 82
Grande Prairie		167 70			167 70
Grouard		256 40			256 40
Humboldt		325 45			325 45
Kamloops	7,172 44	41 92		8 00	7,222 36
" collected at head office	818 15				818 15
Lethbridge	4,778 44	22 50			4,800 94
" collected at head office	6,570 56				6,570 56
Medicine Hat	*15,177 65	651 00			15,828 65
" collected at head office	14,278 05				14,278 05
Moosejaw	1,991 54	995 70			2,987 24
" collected at head office	2,945 65	1 00			2,946 65
New Westminster	32				32
" collected at head office	8 26				8 26
Prince Albert		838 40	16 83	13 50	868 73
Red Deer		583 85			583 85
Regina		131 20			131 20
" collected at head office	4 45				4 45
Saskatoon		724 30			724 30
" collected at head office	9 16	2 00			11 16
Swift Current	2,104 61	611 70			2,716 31
" collected at head office	6,301 21	2 00			6,303 21
Winnipeg	10 50	583 00	117 63	110 38	821 51
" collected at head office	2 72	15 40			18 12
Yorkton		224 30			224 30
" collected at head office		1 00			1 00
	71,039 41	9,754 22	134 46	180 49	81,108 58
Fireguarding—Head office			22,721 71		22,721 71
	71,039 41	9,754 22	22,856 17	180 49	103,830 29

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*Total $15,177.65 includes $1,520.00 paid in scrip.

No. 26a.

REPORT OF THE CROWN TIMBER AGENT AT WINNIPEG.

Department of the Interior,
Crown Timber Office,
Winnipeg, Manitoba, June 7, 1912.

J. W. Greenway, Esq.,
Commissioner of Dominion Lands,
Ottawa, Ont.

Sir,—I have the honour to submit the following report in connection with the Winnipeg Crown Timber Office for the fiscal year which ended on March 31, 1912. Attached to the report are the following statements, viz.:—

Schedule 'A.' showing receipts from timber, grazing and hay permits on Dominion lands. Total, $94,869.95.

Schedule 'B.' giving the names of berth holders operating under license, and the extent of such operations.

Schedule 'C.' showing the mills operated under permits, including portable sawmills. This statement also shows the quantity of green and fire-killed timber cut under permits on Dominion lands.

Schedule 'D.' furnishing particulars relating to the general work of the office during the year.

In addition to the timber accounted for in the Schedules 'B.' and 'C.' the following was cut by settlers and others on Dominion lands, viz.:—

SETTLERS' PERMITS.

Number of permits issued to settlers, authorizing the cutting of the following quantity of timber for use on their farms, viz.	429
Lumber (feet B.M.)	1,720,528
Building logs (lineal feet)	288,364
Fence rails	34,070
Fence posts	47,355
Roof poles	17,080
Number of permits issued to settlers and others under Section 42 of the Timber Regulations	793
Covering cords of wood	33,964

CORDWOOD BERTHS.

Number of permits issued on cordwood berths	49
Authorizing the cutting of the following quantity of timber, viz.:—	
Cords of wood	17,919
Railway ties	8,500
Fence posts	400

PERMIT BERTHS.

Number of permits issued on permit berths (acquired under the old regulations)	45
Authorizing the holders thereof to cut:—	
Cords of wood	26,706

In addition to the above, five permits were granted to railway contrators authorizing the cutting of:—

Ties for construction purposes	45,366

SEIZURES.

During the past year 45 seizures were made covering timber cut on Dominion lands as follows:—

Lumber (feet B.M.)	1,860,125
Logs (lineal feet)	15,025
Fence posts	5,100
Railway ties	7,975
Laths	1,047,900
Cords of wood	12,830
Telegraph poles	240
Roof poles	81
The dues, including expenses charged in connection with these seizures, amounted to	$ 10,035 67
There was one seizure made covering 30 tons of hay, and the dues thereon amounted to	30.00

HAY PERMITS.

Number of hay permits on Dominion lands	202
Tons of hay covered thereby	3,901

Your obedient servant,

ANDREW FREEMAN,
Crown Timber Agent.

Schedule A.—Statement of Receipts from Crown Timber Agency at Winnipeg for Fiscal Year ending March 31, 1912.

Month.	Bonus under License.	Ground Rent under License.	Royalty Dues under License.	Permit Fees, Dues and Rental.	Seizures.	Grazing Lands Rentals.	Hay Permits, Fees and Dues.	Fire Guarding Fees.	Totals.	Remarks.
1911.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
April		3,319 63	1,012 72	6,610 92	566 60		203 75	2 70	11,716 32	
May		3,451 18	2,794 02	2,959 61	4,426 65	1 60	40 30	13 28	13,692 64	Assignment fees, 6 00
June		1,709 31	1 71	3,090 17	244 55		193 95	45	5,240 14	
July			2,853 79	2,659 42	128 00		103 90	18 40	5,763 51	
August	4,025 00	172 30	4,437 46	2,327 66	2,181 50	4 45	31 40	5 85	13,226 44	" " 40 82
September		700 86	17 83	3,832 49			2 20	90	4,554 28	
October		1,299 30	4,206 02	1,214 67			40		6,759 21	" " 38 82
November		32 00	3,126 73	6,119 01	876 97		5 00	37 58	10,203 79	" " 6 50
December			2,065 51	2,665 51	673 41		2 10		5,408 53	" " 2 00
1912.										
January	2,586 00		1,948 60	3,476 84	295 50				8,306 94	
February	1,531 47		2,116 08	1,502 55	28 49	4 45		1 30	5,190 58	" " 6 24
March			1,173 09	1,511 33	214 00			37 17	2,945 59	" " 10 00
Totals	8,142 47	10,684 58	25,753 56	37,970 18	9,635 67	10 50	583 00	117 63	93,007 97	110 38
Head Office Collections—										
1911.										
April					300 00		10 00		310 00	
May		2 90				80			3 70	
June		475 35			100 00				575 35	
July							1 90		1 90	
August										
September			905 61						905 61	
October						1 12	1 00		2 12	
November						80			80	
December										
1912.										
January		25 00							25 00	
February							2 50		2 50	
March			35 00						35 00	
Totals		503 25	940 61		400 00	2 72	15 40		1,861 98	
Grand total	8,142 47	11,187 83	26,694 17	37,970 18	10,035 67	13 22	598 40	117 63	94,869 95	110 38

Note.—Bonuses are collected at Head Office.

Schedule B.—Showing the sawmills operating within the Winnipeg Agency

No.	Mill Owner.	Location of Mill.	Berth No.	Kind of Power.
1	Burrows, T. A.	Grandview	814	Steam
2	"	"	986	"
3	"	"	992	"
4	"	"	1120	"
5	Bank of B. N. A.	Brandon	15	"
6	Bank of Ottawa	Durban	1148	"
7	Bjornson Halli	Icelandic River	1250	"
8	Bank of Ottawa	7—45—7 W 1st	960	"
9	Canadian Bank of Commerce	Mill destroyed by fire	1101	"
10	Dauphin Lumber Co.	Grandview	575	"
11	Dart, James A.	West of Goose Island	1023	"
12	Dagg, James F.		1685	"
13	Dutton, W. P	Greenbush	1597	"
14	Davis Hon. T. O	Erwood	1799	"
15	Galloway, Roper	No mill	1388	"
16	Gunn, John	Point du Bois	1545	"
17	Jefferson, W. D	21—21—1 E	1061	"
18	"		1127	"
19	"		1256	"
20	Moore, E. D	Riverton	1245	"
21	Mutchenbacker Bros	Mill destroyed by fire	1614	"
22	McArthur Co., Ltd., J. D.	Grassy Narrows	702Blk4	"
23	"	Lac du Bonnet	857	"
24	"		965A	"
25	"		1013	"
26	"		1189	"
27	McArthur, Peter	Graves Point	824	"
28	"		838	"
29	"		1062	"
30	"		1063	"
31	"		1145	"
32	McClure, J. H	15—19—2 E	924	"
33	McKenzie, Mann & Co	Mistatim	1241	"
34	McLellan, Hillson & Rogers	Hudson Bay Junction	964	"
35	Newton, F. T.	Madge Lake	742	"
36	Peden, Wm	30—20—22 W 1st.	752	"
37	Robinson, Wm	Black River	716	"
38	"		869	"
39	Red Deer Lumber Co.	Barrows	92	"
40	"		823	"
41	"		988	"
42	"		1051	"
43	"		1239	"
44	Rutley, James	12—22—17 W 1st	888	"
45	Shaw, James & Thos.	Greenbush	974	"
46	"	(No mill)	980	"
47	Sinnott, John	Shortdale	27A	"
48	Thomas, J. T.	Foley	976	"
49	Thompson Lumber Co	9—24—6 E 1st	1254	"
50	Williams, W. J. F.	30—29—18 W 1st	944	"

under Government License for the Fiscal Year ending March 31, 1912.

Horse Power.	Capacity per 10 hours.	Species of timber cut.	Lumber.		
			Manufactured Ft B. M.	Sold Ft. B. M.	On hand Ft. B. M.
500	125,000	Spruce and tamarack.........	43,417	43,417	....
....	....	....	5,332,074	5,776,880	1,158,782
....	....	....	5,206,737	1.432,738	4,485,639
....	....	....	2,653,408	885,082	1,768,326
85	30,000	Spruce	2,688,856	4,170,789	....
35	12-15,000	″	253,120	244,267	3 6,154
25	8,000	Spruce and tamarack.... ...	19,100	19,100	....
300	100,000	″ ″	5,352,957	1,867,212	3,753,557
....	....	....	....	3,694,266	746,781
500	125,000	Spruce and tamarack.........	342.482	132,735	522,125
55	15,000	Tamarack and pine	300,000	154,315	145,685
....	....	Spruce	....	....	....
150	50,000	″	1,136,457	720,840	415,617
50	20,000	″	....	....	....
....	....	....	2,050,664	2,050,664	....
125	25,000	Spruce and tamarack.........	....	....	....
40	8,000	″ ″	....	111,180	24,088
....	....	....	181.122	48,319	132,803
....	....	....	....	11,820	....
45	10,000	Spruce.	....	....	100,000
....	....	″	....	1,034,957	....
50	15,000	″	....	693,000	....
100	50,000	″	121,143	121,143	....
....	....	Spruce and tamarack.........	318,479	318,479	....
....	....	....	....	845,132	81,805
....	....	....	945,820	206,887	802,022
60	20,000	Spruce and tamarack........	1,904,448	2,044,842	512,340
60	20,000	″ ″	123,480	13,480	110,000
....	....	″ ″	....	....	....
....	....	″ ″	....	....	....
....	....	....	....	....	....
60	12-15,000	Spruce	521,500	362,000	603,150
150	50,000	″	....	1,510,247	....
200	25-30,000	″	4,237,695	3,490,908	2,649,975
25	8,000	Spruce and tamarack.... ...	503,000	10,000	503,000
35	8,000	Spruce and poplar....	....	32,000	....
150	70,000	″ tamarack.........	672,860	672,860	....
....	....	....	677,933	1,129,154	936,419
650	110,000	Spruce.....................	6,470,009	4,624,447	3,030,988
....	....	....	5,258,414	3,496,431	2,602,409
....	....	....	858,750	1,410,239	....
....	....	....	658,501	658,501	....
....	....	....	244,252	656,692	....
32	7,000	Spruce and tamarack.........	93,859	93,859	....
250	50,000	Spruce.....................	1,411,462	2,452,542	878,886
....	....	″	170,113	170,113	....
40	20,000	″	505,420	556,045	....
60	12,000	″	59,398	67,398	....
50	15,000	Spruce and tamarack..... ...	....	20,000	....
16	5,000	Spruce and poplar.....	150,000	83,000	122,600
			51,466,930	48,137,980	26.432,551

SCHEDULE B.—Showing the sawmills operating within

No.	Log Count.			Average per Log Ft. B. M.	Railway Ties.			Laths.	
	Logs cut.	Logs Manufactured.	Logs on hand.		Manufactured.	Sold.	On hand.	Manufactured.	Sold.
1	492	492	....	88	....	....	....	....	....
2	....	75,945	....	70	467	467	....	755,735	755,735
3	77,000	80,093	25,000	65	....	....	....	60,550	44,500
4	....	35,608	71,760	74	....	....	....	592,015	289,915
5	....	53,767	....	50	....	....	....	....	....
6	4,272	4,918	....	51	....	....	....	....	....
7	2,660	460	2,200	41	....	....	....	....	....
8	81,273	98,293	56,858	54	....	....	....	....	....
9	30,971	....	30,971	....	....	....	1,315	....	....
10	7,465	7,465	....	45	....	....	....	....	....
11	350	12,453	....	24	....	....	....	....	....
12	13,395	....	13,395	....	....	....	....	....	....
13	78,576	23,234	72,280	48	....	....	....	403,000	277,000
14	16,512	....	16,512	....	....	....	....	....	....
15	35.597	32,696	36,397	62	13,592	....	13,592	....	....
16	74,068	....	74,068	....	....	....	....	....	....
17	....	....	....	....	....	....	....	....	....
18	12,400	7,100	6,500	25	....	....	....	....	....
19	....	....	....	....	....	....	....	....	....
20	....	....	....	....	....	....	....	....	....
21	....	....	....	....	....	....	....	....	....
22	....	....	....	....	....	....	....	....	....
23	....	3,000	....	43	....	....	....	....	....
24	....	8,927	....	35	....	....	....	....	....
25	49,440	....	49,440	....	....	....	....	....	....
26	....	26,000	....	35	....	1,201	....	3,450	5,150
27	39,460	33,301	57,663	57	....	6,020	400	....	....
28	....	3,075	3,756	40	....	3,400	....	....	....
29	....	....	....	....	....	....	....	....	....
30	....	....	4,172	....	....	....	....	....	....
31	....	....	....	....	....	....	....	....	....
32	6,031	10,650	3,031	49	....	....	....	....	....
33	....	....	....	....	....	....	....	....	....
34	121,734	121,328	106,401	34	....	....	....	2,447,000	1,312,400
35	6,259	7,759	....	64	....	....	....	....	....
36	....	...	....	....	....	....	....	....	....
37	3,945	19,790	....	34	....	....	....	....	....
38	52,024	18,775	52,024	36	....	....	....	....	....
39	222,974	120,779	260,700	53	....	....	....	1,758,852	640,267
40	103,508	97,757	131,108	53	....	....	....	1,343,845	500,190
41	....	17,175	....	50	....	....	....	334,342	151,142
42	27,950	11,769	16,181	55	....	....	....	89,481	67,621
43	....	4,505	58,309	54	....	....	....	....	....
44	2,641	2,462	2,463	38	....	....	....	....	....
45	....	28,843	1,426	48	....	....	....	500,000	693,500
46	....	3,914	2,701	43	....	....	....	....	....
47	3,091	10,209	3,091	49	....	....	....	....	....
48	433	933	....	63	....	....	....	....	....
49	1,000	....	1,000	....	....	....	....	....	....
50	4,300	4,300	....	34	....	....	....	....	....
	1,079,827	987,775	1,159,407	....	14,059	11,088	15,307	8,288,270	4,737,420

the Winnipeg Agency under Government License, etc.—*Concluded.*

	Shingles.			Average price of Lumber per M. ft.	Number of Returns made.	Date of Last Return.	Remarks.
On hand.	Manufactured.	Sold.	On hand.				
				$ cts.			
....	....	....	....	16 00	3	Mar. 31, '12.	Berth cancelled.
....	....	....	....	16 52	4	"	
16,050	....	....	....	17 25	4	"	
302,100	....	....	....	18 00	4	"	
....	....	....	....	19 33	4	"	16,248 logs written off.
....	....	....	....	18 50	4	"	Operated by the Durban Lumber Co.
....	....	....	....	12 00	4	"	
....	....	....	....	15 82	4	"	Operated by Shaw Bros.
....	....	....	....	15 00	4	"	Operated by Mutchenbacker Bros.
....	....	....	....	15 00	4	"	
....	....	....	....	16 90	4	"	
....	....	....	....	....	....	"	
126,000	....	....	....	18 91	4	"	
....	....	....	....	....	2	"	
....	....	....	....	18 50	4	"	646 logs written off.
....	....	....	....	....	....	"	
....	....	....	....	17 50	4	"	
....	....	....	....	18 00	4	"	
....	....	....	....	18 00	4	"	
....	....	....	....	....	4	"	
....	....	....	....	15 00	4	"	
....	....	....	....	16 00	4	"	Oper. by Beaver Lumber Co., since assigned to Midland Investment Corporation.
....	....	....	....	17 00	4	"	
....	....	....	....	17 00	4	"	
....	....	....	....	17 00	4	"	
....	....		....	17 00	4	"	
....	....		....	19 20	4	"	
....	....	....	....	17 00	4	"	
....	....	....	....	....	4	"	
....	....	....	....	....	4	"	
....	....	....	....	....	4	"	
....	....	....	....	16 25	4	"	
1,924,700	....	....	....	....	4	"	
....	....	....	....	18 66	4	"	
....	....	....	....	10 00	4	"	
....	....	....	....	16 00	3	Dec. 31, ':2.	Cancelled.
....	....	....	....	22 00	....	Mar. 31, '12.	
....	....	....	....	21 00	....	"	3,223 logs written off.
1,122,235	....	....	....	17 88	....	"	
843,655	....	....	.	17 88	....	"	
183,200	....	....	....	18 00	....	"	
21,860	....	....	....	17 75	....	"	
....	....	....	....	17 75	....	"	
....	....	....	....	11 00	4	"	900 logs written off.
190,850	....	....	....	18 91	4	"	Operated by Great West Lumber Co.
....	....	....	....	16 00	4	"	Operated by Tisdale Lumber Co.
....	....	....	....	19 11	4	"	
....	....	....	....	15 66	4	"	
....	....	....	....	18 00	4	"	
....	85,000	35,000	50,000	18 50	4	"	175 logs written off.
4,730,650	85,000	35,000	50,000				

SCHEDULE C.—Showing the mills (including the portable mills) operating within
March

No.	Mill Owner.	Location of Mill.	Berth No.	Species of Timber Cut.	Lumber.	
					Manufactured, Ft. B. M.	Sold Ft. B.M
1	Boily, P. E.	28-6-11 E.	1897	Spruce and tamarack.	100,060	83,000
2	Bouvier, E	6-24-1 W 1.	134SL	Spruce.	72,029	37,029
3	Butson, W. F.	Birch River.	1636	"	186,800	194,800
4	do	"	1849	"	130,000	130,000
5	Cockerill, Chas.	24-27-27 W 1.	1740	"	159,050	142,140
6	Finnsson, Kris.	14-24-3 E.	1718	"	....	87,500
7	Finnsson, S.	36-23-1 E.	1754	"	31,500	31,500
8	Fulton, Thos	16-38-5 W 2.	1892	"	....	....
9	Gamache, A. J.	9-23-3 W 1.	1757	Spruce and tamarack.	206,184	188,342
10	Gunn, D. J.	1-37-8 W 2.	1623	Spruce.	13,000	42,000
11	Hale, Eric.	24-18-18 W 1.	1755	"	19,113	32,813
12	Hawke, Stewart.	38-45-9 W 2.	1876	"	....	....
13	Heale, John.	4-20-2 E.	107SL	Spruce and poplar	83,000	83,000
14	Henry, Wm.	11-16-8 E.	77SL	Spruce and tamarack.	....	15,000
15	Hodgins, Alex.	14-23-6 W 1.	1601	Spruce.	....	55,000
16	do	3-25-5 W 1.	1850	"	105,000	30,000
17	Hunter, J. D	15-36-24 W.	1662	Spruce and tamarack.	78,755	80,098
18	Jefferson, F. J.	11-22-1 E.	123SL	"	76,000	20,000
19	Keillor, Alex.	10-33-28 W 1.	1588	Spruce.	259,889	259,889
20	Marshall, John, Jr.	17-23-11 W 1.	1775	Spruce and poplar.	247,910	222,910
21	Marshall, Sam	15-25-14 W 1.	1893	Spruce.	28,064	18,162
22	Matheson, H. W.	7-26-8 W 1.	1748	"	8,007	41,562
23	do	31-26-5 W 1.	1809	Spruce and tamarack.	133,576	40,480
24	Mason, Jas	31-18-15 W 1.	1763	Poplar and jackpine.	58,000	70,228
25	Morrow, W. H.	19-46-12 W 2.	1872	Spruce	....	....
26	McDougall, Alex	25-22-14 W 1.	1751	"	12,000	12,000
27	McHaffie, Peter.	4-38-27 W 1.	1576	"	35,000	91,000
28	Oddleifsson, G.	1-21-2 E.	1559	"	31,827	31,827
29	Poitras, Pierre.	26-4-11 E.	1646	Spruce and tamarack.	61,000	86,000
30	Parkinson, Wm.	27-39-26 W 1.	1761	Spruce and poplar.	....	58,780
31	Walstrom, Victor	26-18-17 W 1.	1776	Spruce and tamarack.	17,000	27,000
					2,152,764	2,212,060
	Permit Berths.					
32	Blackburn & Browning.	18-45-8 W 2.	1805	Spruce and tamarack.	150,000	....
33	Caverley, Jefferson.	Porcupine Mtn.	966	Spruce, tamarack and poplar.	1,714,915	624,844
34	McArthur Co., Ltd, J.D.	Lac du Bonnet.	793	Spruce and tamarack.	71,400	71,400
35	do	....	1543		189,300	189,300
36	Serkan & Smith.	Siglunes.	1090	Spruce.	....	133,600
37	Tholimet, L.	30-29-13 W 1.	1814	"	....	....
					2,125,615	1,019,144
	Special Permit Berths, covering all Green and Fire Killed Timber.				Logs.	
38	Gamache, A. J.	9-23-3 W 1.	1738	Spruce.	9,715	....
39	Great West Lumber Co.	Greenbush.	1693	"	71,635	....
40	do	....	1696	"	15,633	....
41	Western Lumber Co.	10-45-5 W 2.	1695	"	800	....
					97,783	....

the Winnipeg Agency, under Government permits, for the Fiscal Year ending 31, 1912.

On Hand Ft. B.M.	Log Count.			Average per Log, Ft. B. M.	Railway Ties.		Average Price of Lumber per M.D.	No. of Returns made.	Date of Last Return.	Remarks.
	Logs Cut.	Logs Manufactured	Logs on Hand.		Manufactured	Sold.				
							$ cts.			
17,060	3,572	3,572	....	28	....	....	14 00	1	Mar. 31, '12	
35,000	2,303	1,176	1,127	61	....	....	13 60	1	"	
....	2,915	3,015	....	61	....	....	13 00	2	Sept. 30, '11	Cancelled.
....	1,898	1,898	....	68	....	....	13 00	2	Mar. 31, '12	
19,910	6,243	3,181	5,102	50	....	....	16 06	4	"	50 logs and 5,000 ft. B. M. lumber written off.
....	....	....	....	....	....	....	12 00	3	Nov. 4, '11	Cancelled.
....	2,000	900	2,000	35	....	....	15 00	4	Mar. 31, '12	
....	2,986	....	2,986	....	....	....	....	1	"	
17,842	6,793	3,879	3,661	53	....	....	15 00	4	"	
....	....	272	....	47	....	....	15 00	1	June 30, '11	Cancelled.
....	....	732	....	26	....	....	12 00	4	Mar. 31, '12	
....	700	....	700	....	....	....	....	1	"	
....	1,325	2,125	1,325	39	....	....	20 00	4	"	
....	....	....	....	....	....	....	20 00	1	June 30, '11	Cancelled.
....	....	....	....	....	....	....	16 00	1	"	Cancelled.
75,000	1,800	1,800	....	59	....	....	18 00	2	Mar. 31, '12	
6,939	475	1,148	375	68	....	....	15 33	4	"	
56,000	2,900	2,400	500	31	....	....	14 00	3	"	
....	7,645	7,645	....	34	....	....	16 60	4	"	
25,000	6,450	6,375	75	38	....	....	16 50	4	"	
9,902	1,596	1,401	195	20	....	....	14 00	1	"	
....	....	322	....	24	....	....	16 00	2	Sept. 30, '11	Cancelled.
93,096	2,155	2,055	100	65	....	....	16 00	2	Mar. 31, '12	
....	2,094	2,406	....	24	....	....	13 50	4	"	
....	2,149	....	2,149	....	....	....	....	1	"	
....	200	250	....	48	....	....	18 00	4	Mar. 4, '12	Cancelled.
....	....	500	....	70	....	....	15 00	2	Sept. 30, '11	Cancelled.
....	....	1,000	....	31	....	....	14 00	1	June 30, '11	Cancelled.
15,000	1,780	1,930	....	31	....	....	15 25	4	Mar. 31, '12	
....	....	....	....	....	....	....	12 00	3	Dec. 31, '11	Cancelled 100 logs written off.
....	....	500	....	34	....	....	14 00	4	"	Cancelled.
370,749	59,979	50,482	20,295	....	....	....	....	....		
150,000	7,640	3,400	4,240	44	....	....	....	1	Mar. 31, '12	
									"	
1,686,592	36,934	33,920	3,014	50	....	....	16 75	4	"	
....	....	2,000	....	35	1,367	1,367	16 50	4	"	
....	....	5,300	....	35	....	....	16 50	4	"	
....	....	....	....	....	....	....	17 00	4	"	
....	12,293	....	12,923	....	....	....	....	1		
1,836,592	56,867	44,620	19,547	....	1,367	1,367	....	....		
						Ft. B.M.				
.... Scaling (Scribner's Rule)						419,567	....	4	Mar. 31, '12	
....						2,911,968	....	4	"	
....						579,000	....	4	"	
....						24,430	....	4	"	
....						3,934,965				

SCHEDULE D.—General Office Return of the Crown Timber Agency, Winnipeg, for Fiscal Year ending March 31, 1912.

Particulars.	Number, &c.	As compared with previous year. — Increase.	As compared with previous year. — Decrease.	Remarks.
Letters received	19,480	1,262	....	Including land department
Letters written	23,938	3,322	....	No separate record kept.
Permits subject to dues issued	636	58	....	
Free permits issued	780	97	....	
Seizures made	55	....	2	
Mill returns received and verified	688	56	....	
Mills operating under government license	29	....	2	
Mills operating under government permits	33	5	....	
Quantity of lumber manufactured, under license (feet)	51,466,930	4,097,647	....	
Quantity of lumber sold, under license (feet)	48,137,980	....	5,862,704	
Quantity of lumber on hand, under license (feet)	26,432,551	3,328,950	....	
Average price at which lumber sold	$16.28	....	$0·24	
Hay permits issued (Dominion Lands)	202	....	56	

No. 26b.

REPORT OF THE CROWN TIMBER AGENT AT EDMONTON.

DEPARTMENT OF THE INTERIOR,
DOMINION LANDS AND CROWN TIMBER OFFICE,
EDMONTON, ALBERTA, June 20, 1912.

J. W. GREENWAY, Esq.,
Commissioner of Dominion Lands,
Ottawa, Ont.

SIR,—I have the honour to submit the annual report of the Edmonton Crown Timber Agency for the financial year ending March 31, 1912.

The past year has been an exceedingly busy one in this agency, the volume of business as well as the revenue having again been almost double that of the previous year, viz.: $83,254.50, as against $52,716.80 for the previous year. As will be seen from schedule 'D.' of this report, the increase has been gereral in every branch of the work and there is reason to believe that high water mark has by no means been reached.

While the number of timber seizures shows an increase of forty-one over the previous year, I am satisfied that this is the result of better administration of the regulations, rather than an indication that settlers are cutting more government timber without permits; in fact, I am assured by the inspectors attached to my staff, that there is less trespass cutting than at any previous time.

The feature of the year has been the large number of railway construction permits issued, covering 1,864,364 railway ties and 94,339 lineal feet of piling, for the construction of the Canadian Northern main line and branches, and the Grand Trunk Pacific and Alberta Central lines to the Brazeau coal fields. Owing to the number of unfinished inspections by the various companies, it is not possible to give the actual total of ties cut, but including ties cut on licensed berths, I believe same will exceed 2,000,000. As all applications for permits of this nature have been reported on by my inspectors, prior to issue, there has been less unnecessary destruction of growing timber, the woods have been left in better condition and the needs of the settlers have been conserved.

Logging on the North Saskatchewan river during the year was fortunately carried on without the heavy losses so common in past seasons, and the manufactured product of the three Edmonton mill owners was considerably above the average in quantity.

Several licensed berths have changed hands during the year and operations thereon have either been commenced or are shortly to be started; the heavy demand for lumber from the many new railroad points, which demand cannot legally be supplied by the portable mills, certainly warrants larger operations by licensed berth holders.

As anticipated in my last report, there have been many applications to have timber put up for sale and at the present time over a dozen blocks of timbered land within the agency are being examined with a view to their sale at a later date.

Timber permits issued during the year covered the following items:—

Sawn lumber, ft. B.M.	5,877,689
Bridge and culvert timber, ft. B.M.	309,000
Building logs, lineal ft.	2,108,983
Mining props, lineal ft.	170,200
Piling, lineal ft.	94,339
Fence rails	2,152,348
Roof poles	412,848
Fence posts	555,150
Cords of wood	1,382½
Shingles	25,000
Railway ties	1,864,364
Telephone poles	18,244

The year's manufacture of lumber was as follows:—

	Ft. B.M.
(*a*) By licensed berth holders	16,472,600
(*b*) By permit berth holders	20,138,704
(*c*) By portable sawmills under settlers' permits, approximately	10,000,000
Total	46,611,304

The average selling price of common lumber was $17, about $1 higher than the preceding year.

The following schedules are attached:—

'A.'—Statement of receipts.

'B.'—Sawmills operating under government license.

'C.'—Mills (including portable sawmills) operating under permit.

'D.'—General office return.

I have the honour to be, sir,
Your obedient servant,

H. D. CLARKE,
Acting Crown Timber Agent.

SCHEDULE A.—Statement of Receipts from Crown Timber Agency at Edmonton for Fiscal Year ending March 31, 1912.

Month.	Bonus under licence.	Ground rent under license.	Royalty dues under license.	Permit fees dues and rental.	Seizures.	Hay permits fees and dues.	Fees registration.	Totals.
1911.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
April........	NOTE—Bonuses are collected at Head Office.	486 88	887 09	7,253 15	753 15	585 60	....	9,965 87
May....... ..	....	1,154 92	1,127 67	14,061 04	64 74	107 40	36 74	16,552 51
June..........	....	632 66	....	652 18	5 00	397 30	....	1,687 14
July......... .	....	354 11	902 86	2,443 08	116 00	357 45	....	4,173 70
August.......	....	25 03	184 50	5,338 09	255 40	106 10	....	5,909 12
September.....	....	27 54	36 36	1,773 00	15 30	19 00	....	1,871 20
October.......	2,735 50	218 23	2,977 51	2,599 64	60 25	7 15	2 00	8,600 28
November.....	....	20 08	56 40	2,772 66	173 30	12 70	....	3,035 14
December.....	....	....	....	1,569 07	213 00	1 50	....	1,783 57
1912.								
January	2,526 56	80 30	1,202 36	5,247 64	334 42	53 20	....	9,444 48
February.....	....	....	2,522 08	3,832 27	208 66	10	....	6,563 11
March..	....	26 94	47 85	7,934 97	60 93	1 00	9 87	8,081 56
Totals	5,262 06	3,026 69	9,944 68	55,476 99	2,260 15	1,648 50	48 61	77,667 68
Head Office Collections. 1911.								
April........	....	1,075 66	....	....	....	....	....	1,075 66
May	....	205 00	....	....	100 00	....	....	305 66
June.........	....	8 33	....	....	....	......	....	8 33
July....... ..	....	47	....	....	....	....	....	47
August.......	....	....	....	....	....	....	....	
September	....	129 07	....	....	....	....	....	129 07
October.......	....	4,004 60	....	....	....	....	....	4,004 60
November.....	....	....	....	....	....	....	....	
December.....	....	....	....	....	....	....	....	
1912.								
January	....	....	....	....	....	....	....	
February.....	....	....	....	....	....	....	......	
March..	....	53 69	....	....	....	10 00	....	63 69
Totals	....	5,476 82	....	....	100 00	10 00	....	5,586 82
Grand total..	5,262 06	8,503 51	9,944 68	55,476 99	2,360 15	1,658 50	......	83,254 50

SCHEDULE B.—Showing the sawmills operating withing the Edmonton Agency

No.	Mill Owner.	Location of Mill.	Berth No.	Kind of Power.	Horse Power.
1	D. R. Fraser & Co	Edmonton	9, blocks 5 & 6	Steam.	280
2	Jno. Walter		"	"	260 425
3	D. R. Fraser & Co		788	"	As above.
4	W. C. McDougall	Berth	863	"	40
5	Jno. Walter	Edmonton	887	"	As above.
6	Foulger & Rowley	Pigeon Lake	949	"	90
7	Jno. Walter	Edmonton	956	"	As above.
8	Edmonton Lumber Co.	"	963	"	"
9	D. R. Fraser & Co	"	1008	"	"
10	Jno. Walter	"	"	"	"
11	Blain & McKelvey	Berth	1019	"	75
12	J. A. Card & Son	"	1040	"	35
13	W. B. McPherson	"	1065	"	15
14	The Valley Lumber Co.	"	1079	"	30
15	Hislop & Goodridge	Entwistle	1088	"	75
16	D. R. Fraser & Co	Edmonton	1091	"	As above.
17	Imperial Pulp Co	Berth	1031	"	35
18	Theo. A. Burrows	Ernstad	1093	"	160
19	"		1094	"	
20	"		1099	"	
21	Edmonton Lumber Co.	Edmonton	1125	"	As above.
22	"	"	1156	"	"
23	Laurence Garneau	Berth	1172	"	50
24	J. J. Anderson	"	1185	"	35
25	Jno. Walter	Edmonton	1211	"	As above.
26	The Valley Lumber Co	Berth	1216	"	35
27	Jno. Walter	Edmonton	1242	"	As above.
28	D. R. Fraser & Co	"	1242	"	"
29	Andrew Laidlaw	Berth	1279	"	
30	John Walter	Edmonton	1289	"	As above.
31	Jno. R. McIntosh		1320	"	35
32	Alex Smith	Berth	1330	"	
33	"	"	1331	"	
34	The North West Lumber Co.	"	1340	"	120
35	Jno. Walter	Edmonton	1353	"	As above.
36	Ernest E. Chauvin	Berth	1377	"	
37	D. J. Dunn	"	1394	"	35
38	Imperial Pulp Co.		1119	"	
39	Jno. Walter	Edmonton	Unmarked logs	"	As above.
40	D. R. Fraser & Co	"	"	"	"
41	Edmonton Lumber Co.	"	"	"	"
42	Imperial Pulp Co	Berth	1122	"	

under Government License for the Fiscal Year ending March 31, 1912.

Capacity per 10 hours.	Species of Timber cut.	Lumber.			Log Count.		
		Manufactured.	Sold.	On hand.	Logs Cut.	Logs Manufactured.	Logs on hand.
		Ft. B.M.	Ft. B.M.	Ft. B.M.			
40 M	Spruce and poplar...	915	915	....	....	17	351
75 M each	"	3,220	3,220	....	....	64	136
As above.	" ...	262,431	262,431	....	....	4,733	....
14	Spruce and pine.....	700,958	547,170	219,098	6,840	11,269	467
As above.	Spruce and poplar...	111	111	....	....	2	933
23	Spruce.......... ..	....	200,000	....	....	....	....
As above.	Spruce and poplar ...	550,465	550,465	....	8,921	10,169	934
"	" ...	.....	....	....	20,740	....	20,740
"	" ...	1,785,299	2,428,440	....	55,407	32,752	24,149
"	" ...	73,195	73,195	....	....	1,375	....
20	" ..	1,399,390	331,257	1,102,069	....	28.370	9,674
10	Spruce and pine.....	186,964	208,015	29,629	11,080	4,207	7,783
7	"	282,060	300,130	248,448	8,221	7,371	3,750
6	Spruce pine & tamarack	901,513	906,513	395,000	18,802	18,802	....
20	Spruce..............	478,000	372,435	321,428	......	12,700	....
As above.	Spruce and poplar....	452,338	452,338	....	....	8,220	....
10	Pine and tamarack...	206,966	28,558	178,408	4,991	3,144	1,847
35	Spruce and pine......	2,409,293	1,426,310	982,983	67,820	39,598	28,222
....	"	17,735	17,735	....	....	....	....
....	"	....	....	....	....	....	....
As above.	Spruce and poplar....	308,998	308,998	....	4,120	5,660	6,667
"	"	183,312	635,828	....	3,682	3,420	8,927
10	"	26,862	255,750	67,869	6,887	459	10,020
10	"	269,100	60,565	208,535	15,000	8,000	7,004
As above.	" ...	1,617,514	1,617,514	....	25,372	29,444	21,451
7	"	....	....	140,000	....	....	41,457
As above.	"	80,152	595,934	....	......	1,491	9,404
"	"	....	33,051	33,051	....	623	....
....	....	....	....	....	....	....	....
As above.	Spruce and poplar ...	220	220	....	....	4	10,925
10	"	200,000	100,000	100,000	5,250	3,000	2,250
....	Spruce and pine.....	1,643,802	532,208	1,111,594	53,078	38,080	14,998
....	"	309,526	309,526	....	9,000	9,000	....
25	Spruce and poplar ...	1,518,209	1,137,327	380,882	....	26,265	....
As above.	"	11,204	11,204	....	....	214	1,217
....	"	....	....	....	....	....	....
10	Spruce..............	454,540	454,540	....	....	8,182	8,182
....	Pine	....	....	....	387	....	387
As above.	Spruce and poplar...	49,937	49,937	....	913	913	....
"	"	34,907	34,907	....	630	630	....
"	" ...	53,464	53,464	....	1,000	1,000	....
....	Pine	....	....	....	....	....	....
		16,472,600	14,300,217	5,518,994	328,141	319,178	241,875

SCHEDULE B.—Showing the sawmills operating within the

No.	Average per Log.	Railway Ties.			Laths.		
		Manufactured.	Sold.	On hand.	Manufactured.	Sold.	On hand.
	Ft. B.M.						
1	53·8						
2	50·3						
3	55·4						
4	62 2						
5	55·0						
6							
7	54·1						
8							
9	54·5				299,699	299,699	Nil
10	53·2						
11	49·3						
12	44·4						
13	38·2						
14	47·9						
15	37·6		170				
16	55·0						
17	65·8						
18	60 8	14,081	14,081	Nil	50,000	Nil	50,000
19		3,000	3,000	Nil			
20		25,192	12,820	12,372			
21	54·5				432,386	432,386	
22	53·7						
23	57·9						
24	33·6						
25	54·9				837,548	837,548	
26		1,841	41,806				
27	53·1						
28	53·0						
29							
30	55·0						
31	66·6						
32	43·1	2,240	1,323	917	300,000	100,000	200,000
33	34·4	3,920	2,920	1,000	35,000	35,000	
34	57·8						
35	52·2						
36							
37	55·5						
38		213,066	213,066				
39	54·6						
40	55·5						
41	52 4						
42		71,056	71,056				
	51·6	334,396	360,242	14,289	1,954,633	1,704,633	250,000

Edmonton Agency under Government License, &c.—*Concluded.*

Shingles.			Average Price of Lumber per M. ft.	No. of Returns made.	Date of Last Return.	Sundries.	
Manufactured.	Sold.	On hand.				Manufactured.	Sold.
			$ cts.				
....	....	....	15 00	1	Dec. 31, 1911....		
....	....	....	15 00	1	" 31, 1911....		
....	....	....	15 00	1	" 31, 1911		
....	....	....	18 50	4	Mar. 31, 1912....	Piling. 2,100	Piling. 7,950
....	....	....	15 00	1	Dec. 31, 1911....		
....	....	....	12 00	4	Mar. 31, 1912....		
....	....	....	15 00	1	Dec. 31, 1911....		
....	....	....	....	1	" 31, 1911....		
....	....	....	15 00	1	" 31, 1911....		
....	....	....	15 00	1	" 31, 1911....		
....	....	....	14 00	4	Mar. 31, 1912....		
....	....	....	14 00	4	" 31, 1912....		
....	....	....	18 00	4	" 31, 1912....		
....	....	....	14 00	4	" 31, 1912 ..		
....	....	....	17 60	4	" 31, 1912....		
....	....	....	15 00	1	Dec. 31, 1911....		
....	....	....	17 00	4	Mar. 31, 1912....		
....	....	....	19 75	4	" 31, 1912.. .	Piling. 30,435	Piling. 30,435
....	....	....	3 00	4	" 31, 1912....	3,000 Cordwood. 300	3,000 Cordwood. 300
....	....	....	....	....	....	Piling. 40,908	Piling. 40,908
....	....	....	15 00	1	Dec. 31, 1911....		
....	....	....	15 00	1	" 31, 1911....		
....	....	....	21 00	4	Mar. 31, 1912....		
....	....	....	15 00	4	" 31, 1912....	Piling. 1,305	Piling. 1,305
....	....	....	15 00	1	Dec. 31, 1911....		
....	....	....	....	4	Mar. 31, 1912....		
....	....	....	15 00	1	Dec. 31, 1911....		
....	....	....	15 00	1	" 31, 1911....		
....	....	....	....	3	" 31, 1911....	No	operations.
....	....	....	15 00	1	" 31, 1911....		
....	....	....	22 00	4	Mar. 31, 1912....		
....	....	....	18 00	4	" 31, 1912....	Piling. 5,400	Piling. 5,400
....	....	....	18 00	4	" 31, 1912....		
....	....	....	14 00	4	" 31, 1912....		
....	....	....	15 00	1	Dec. 31, 1911....		
....	....	....	....	4	Mar. 31, 1912....	No	operations.
....	....	....	16 00	4	" 31, 1912....		
....	....	....	....	4	" 31, 1912...	Piling. 4,970 Hewn Ties	Piling. 4,970 Hewn Ties.
....	....	....	15 00	1	Dec. 31, 1911....		
....	....	....	15 00	1	" 31, 1911...		
....	....	....	16 00	1	" 31, 1911....		
....	....	....	....	4	Mar. 31, 1912....	Hewn Ties. Piling. 3,065	Hewn Ties. Piling. 3,065
....	....	....		106	Piling .... Cords of cordwood	91,183 300	97,033 300

SCHEDULE C.—Showing the mills (including portable mills) operating within ending

Number.	Mill Owner.	Location of Mill.	Berth No.	Species of Timber Cut.	Lumber.			Log Count.		
					Manufactured. Ft. B. M.	Sold Ft. B.M.	On hand. Ft. B.M.	Logs cut.	Logs Manufact'rd.	Logs on hand.
1	D. R. Fraser & Co.	Edmonton....	Permit No. 140,064 in lieu of No. 812.	Spr'ce & poplar.	706,703	277,945	486,758	14,001	14,001	......
2	Jno. Walter...	"	1306	" ..	4,384,227	1,498,119	4,114,448	38,378	80,314	22,271
3	" ...	"	Order in Council 10-7-07.	" ..	55,029	320,744	....	....	1,017	16,084
4	Edmonton Lumber Co.	"	" ..	" ..	. ...	50,756	....	.. ...	.... .	......
5	Empire Supply Co., operations of Jno. Walter	" ...	Timber Permit No. 140,029	" ..	7,169,608	741,107	6,516,653	136,961	131,213	9,797
6	Empire Supply Co., operations of D. R. Fraser Co.	"	"	" ..	279,895	279,895	.. ..	5,735	5,122	613
7	Henry Meyer..	Berth....	1308	" ..	....	30,000	....	..... .	....	..... .
8	J. E. Gibeault.	"	1381	" ..	....	55,206	....	....	....	... ...
9	H. A. Calder, operations of Jno. Walter.	Edmonton....	1477	Spruce .	218	218	.. ..	..... .	4	1,028
10	Jno. Walter...	"	1486	Spr'ce & poplar.	10,958	271,006	....	2,364	271	2,093
11	" ...	" ...	1487	" ..	2,188	2,482	... .	.... .	40	5,498
12	Louis Lagasse..	Berth....	1489	" ..	....	53,000	....	. . .	.... .	. .....
13	Jno. Walter...	Edmonton....	1493	" ..	23,190	253,486	.. ..	....	422	1,089
14	Hislop & McPhee.	Entwistle.....	1496	Spr'ce & pine.	....	....	....	....	.... .	10,000
15	Jno. Walter...	Edmonton....	1497	Spr'ce & poplar.	3,581	17,613	....	..... .	82	14,776
16	Frank Mearon.	Berth	1562	" ..	16,000	4,000	12,000	....	400	.. ..
17	E. J. Dowsett.	"	1599	" ..	.. ..	24,953	....	....	..	....
18	Jn. Zaczkowski	"	1604	" ..	43,768	271,437	208,699	.... .	900	..... .
19	Jno. Anderson.	"	1647	" ..	386,172	355,081	37,068	6,719	6,769	.....
20	Alfd. Desautels	"	1648	Spr'ce & pine.	190,044	190,044	....	1,876	1,876	... . .
21	Jno. Smith....	"	1649	" ..	190,043	190,043	....	1,876	1,876	... .
22	Jas. Smith....	"	1650	" ..	190,044	190,044	....	1,876	1,876	.. . .
23	Jos. Gibeault..	"	1651	" ..	190,044	190,044	.. ..	1,878	1,878	..... .
24	E. O. Hankedahl.	"	1652	Spr'ce & poplar.	193,948	167,851	63,283	462	2,432	2,934
25	P. Maisoneuve.	"	1653	" ..	26,755	36,755	....	495	495	..... .
26	A. W. de H. Smith.	"	1654	" ..	292,096	294,433	7,663	4,169	4,631	. ... .
27	Freeman J. Dodge.	"	1656	" ..	143,000	143,000	....	4,500	4,500	... .
28	W. S. Heffernan.	"	1663	Spr'ce & pine.	.. ..	359,157	201,003	......	....	... .
29	F. C. Papineau	"	1664	Spr'ce & poplar.	349,281	156,155	193,126	11,000	8,500	3,100

the Edmonton Agency, under Government Permits, for the Fiscal Year March 31, 1912.

Average per Log, Ft. B.M.	Railway Ties.			Average prices of lumber per M. feet.	No. of returns made.	Date of last returns.	Sundries.	
	Manufactured.	Sold.	On hand.				Sold.	
				$ cts.			Lath.	
54·6	......	......	......	15 00	1	31—12—11	Manufd.	Sold.
54·5	......	......	......	15 00	1	"	4,624,014	4,063,525
54·1	......	......	......	15 00	1	"		
				16 00	1	"		
54·5	55,264	55,264	......	15 00	1	"		
54·6	1,684	1,684	......	15 00	1	"		
......	......	......	......	11 00	1	30— 6—11		
......	......	......	......	12 00	3	31— 3—12		
54·5	......	......	......	16 00	1	31—12—11		
40·4	......	......	......	16 00	1	"		
54·7	......	......	......	16 00	1	"		
......	......	......	......	12 00	4	31— 3—12		
54·9	......	......	......	16 00	1	31—12—11		
......	......	......	......	......	......	......		
43·6	......	......	......	15 50	1	31—12—11		
40·0	......	......	......	......	......	30— 9—11		
......	......	......	......	15 00	3	31—12—11		
48·6	......	......	......	19 50	4	31— 3—12		
57·0	......	......	......	11 00	4	"	Piling.	
101·3	3,695	3,695	......	......	1	30— 6—11	5,843 Telegraph Poles. 195	5,843 195
101·3	3,695	3,695	......	......	1	"	195 Piling. 5,843	195 5,843
101·3	3,695	3,695	......	......	1	"	5843 Telegraph Poles. 195	5,843 195
101·3	3,697	3,697	......	......	1	"	Telegraph Poles. 195 Piling. 5,844	195 5,844
79·3	......	......	......	20 00	4	31— 3—12		
54·0	......	......	......	15 00	3	31—12—11	Shingles. 42,500	51,500
52·2	......	......	......	12 00	4	31— 3—12		
31·7	......	......	......	......	1	8—12—11		
......	......	......	......	24 00	4	31— 3—12		
31·7	......	......	......	13 00	4	"		

SCHEDULE C.—Showing the mills (including portable mills) operating

Number.	Mill Owner.	Location of Mill.	Berth No.	Species of Timber Cut.	Lumber.			Log Count.		
					Manufactured. Ft. B. M.	Sold Ft. B. M.	On hand. Ft. B. M.	Logs cut.	Logs manufact'rd	Logs on hand.
30	Wm. Brunelle.	"	1691	" ..	78,000	150,000	128,000	6,000	2,500	6,000
31	Shelby D. Reed	"	1719	" ..	24,921	29,474	.. ..	....	....	.... ..
32	N. N. Bentley.	"	1723	Spr'ce & pine.	....	....	....	....	....	....
33	D. M. Rourke.	"	1728	" ..	50,200	91,665	. ...	250	860	..... .
34	J. W. Dodds. .	Chip Lake....	1737	" ..	....	245,000	....	. ...-	.. .. .	..... .
35	W. J. Dent. ..	Berth....	1743	Spr'ce & poplar.	....	50,000	....,....	..... .	....	......
36	Chas. E. Barry.	"	1744	Spr'ce & pine.	....	....	....	.... .	....	.... .
37	A. J. Nichol...	"	1745	" ..	1,072,360	996,563	75,797	22,714	20,925	1,789
38	D. McKinley..	"	1747	" ..	20,000	20,000	... .	....	....	......
39	W. J. Latimer.	"	1756	Spr'ce & poplar.	128,250	43,662	84,588	4,300	2,800	....
40	Emil Baril....	"	1773	" ..	80,000	5,000	75,000	1,800	1,800	..... .
41	Hislop & Goodridge.	Entwistle.... ..	1774	Spr'ce & pine.	75,000	75,000	....	6,000	1,500	3,500
42	Louis Lagasse..	Berth....	1778	Spr'ce & poplar.	40,000 50,408	 50,408	40,000	1,200 1,435	1,200 750	 685
43	O. S. Radway..	"	1782	" ..						
44	Wm. Humberstone.	Chip Lake....	1783	Spr'ce & pine.	....	....	....	1,000	....	1,000
45	Geo. Cummings	Berth....	1789	Spruce, pine & poplar.	436,660	254,973	181,687	8,510	7,895	615
46	The Argonauts Ltd.	"	1795	" ..	191,000	191,000	....	4,939	4,939	.....
47	Jas. H. Woods.	"	1796	Spruce..	245,000	245,000		3,510	3,510	.... .
48	J. B. Schofield.	"	1792	Spr'ce & poplar.	12,140	12,140	....	1,663	245	1,418
49	Fred Meyer....	"	1881	" ..	80,000	20,000	60,000	3,036	1,120	1,916
50	J. A. L. McDougall.	"	1806	Spruce..	217,427	217,427	....	5,671	5,671	....
51	Jno. McKinley	"	1816	Pine....	....	....	....	... ...	....	.... ..
52	M. McKinley .	"	1848	" ...	15,000	15,000	....	750	750	....
53	Jas. H. Wood.	"	1854	Spruce..	243,500	338,500	5,000	3,835	2,485	1,350
54	Alex. McDougall.	"	1811	Pine....	....	....	....	.. . .	....	....
55	Empire Supply Co. Ld., operations of Edmonton Lumber Co.	Edmonton....	Permit No. 140,029	Spr'ce & pine.	2,232,046	1,870,163	361,883	44,905	40,909	3,996
	Totals... ..	....	....	....	20,138,704	11,347,549	12,852,656	353,808	368,478	111,552

within the Edmonton Agency, under Government Permits, &c.—*Concluded.*

Average per Log. Ft. B.	Railway Ties.			Average prices of lumber per M. feet.	No. of returns made.	Date of last returns.	Sundries.	
	Manufactured.	Sold.	On hand.				Sold.	
				$ cts.				
25 0	....	....	....	20 00	4	"		
39·9	....	....	....	11 35	....	....		
....	800	800	....	....	....	....	Piling. 9,060	9,060
58·3	....	....	....	12 00	3	31—12--11		
....	....	....	....	....	3	"		
....	....	....	....	9 00	4	31— 3—12		
....	12,000	12,000	....	....	3	31—12—11		
51·2	....	....	....	....	4	31— 3--12		
....	5,952	5,052	....	19 00	1	12— 1—12		
46·3	....	....	....	12 00	3	31— 3—12		
....	....	....	....	17 00	4	"	Shingles. 50,000	24,000
50 0	....	....	....	25 00	4	"		
33·3	....	....	....	....	4	"		
67·2	....	....	....	17 00	4	"		
....	....	....	....	....	2	31—12—11		
55·3	....	....	....	12 50	4	31— 3—12	Shingles. 384,000	88,250
38·6	....	....	....	20 00	1	31—12—11	82,000	82,000
69·8	....	....	....	27 50	3	"		
49·5	....	....	....	16 00	3	31— 3—12		
71·4	....	....	....	10 00	1	"		
38·3	....	....	....	15 00	1	31— 5—12		
....	2,000	2,000	....	....	2	31—12—11		
20·0	....	....	....	19 00	1	5— 1—12		
90·7	....	....	....	27 50	1	31—12—11		
....	1,000	1,000	....	....	....	....		
....	7,524	7,458	66	15 00	1	31--12—11		
						Lath	4,624,014	4,063,525
						Shingles........	558,500	245,750
						Piling lin. ft....	31,433	31,433
						Tel. Poles......	780	780
54·6	100,106	100,040	66	....	....			

SCHEDULE D.—General Office Return of the Crown Timber Agency, Edmonton, for Fiscal Year ending March 31, 1912.

Particulars.	Numbers, &c.	As compared with previous year. — Increase.	As compared with previous. year. Decrease.	Remarks.
Letters received	Included in Dominion Lands return.			
Letters written	"	"	"	
Permits subject to dues issued	413	15	....	
Free permits issued	1,532	145	....	
Seizures made	62	41	....	
Mill returns received and verified	575	....	25	Nil returns Edmonton Sawmills now taken annually instead of quarterly as formerly.
Mills operating under government license	18	1	....	
Mills operating under government permits	33	13	....	
Quantity of lumber manufactured, under license	16,472,600	1,356,454	....	
Quantity of lumber sold, under license	14,300,211	....	4,006,987	
Quantity of lumber on hand, under license	5,518,994	2,142,851	....	
Average price at which lumber sold	$17 00	$1 00	....	
Hay permits issued	589	95	....	

No. 26c.

REPORT OF THE CROWN TIMBER AGENT AT CALGARY.

DEPARTMENT OF THE INTERIOR,
DOMINION LANDS AND CROWN TIMBER OFFICE,
CALGARY, ALBERTA, May 14, 1912.

J. W. GREENWAY, Esq.,
Commissioner of Dominion Lands,
Ottawa, Ont.

SIR,—I have the honour to enclose herewith the following statements for the twelve months ending March 31, 1912:

Schedule 'A.' statement of receipts on account of Crown Timber covering the period referred to, amounting to $28,091.88.

Schedule 'B.' showing the sawmills within the Crown Timber Agency in operation under government license to March 31, 1912.

Schedule 'C.' showing the portable sawmills operated under permit to the same date.

Schedule 'D.' general office work.

You will observe that the quantity manufactured from licensed berths during the twelve months amounted to 21,129,177 feet B.M., quantity sold 14,952,291 feet B.M., manufactured by portable mills under permits 5,317,639 feet B.M.,, quantity sold 3,860,653, total quantity on hand 16,859,443 feet.

In addition to the 26,446,816 feet B.M. manufactured as above stated, there has probably been about 110,000,000 feet brought into this province from the province of British Columbia and 25,000,000 has been imported from the United States.

The lumber trade would appear to be in a prosperous condition.

I would estimate that the quantity of B.M. lumber which the mill owners will require to manufacture this season from logs on hand would amount to 38,602,218 feet.

I may add that $16.01 per thousand feet B.M. is the average price at which the lumber taken from licensed and permit berths sold during the past year.

Your obedient servant,

W. E. TALBOT,
Crown Timber Agent.

SCHEDULE A.—Statement of Receipts from Crown Timber Agency at Calgary for year ending March 31, 1912.

Month.	Ground rent under license.	Royalty dues under license.	Permit fees, dues and rental.	Seizures.	Grazing Lands Rentals.	Hay Permits Fees and Dues.	Totals.
1911.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
April	541 40	1,102 59	677 26	3 00	468 02	43 50	2,935 77
May	4,075 91	16 10	189 65	....	175 42	12 90	4,469 98
June	17 94	07	153 91	43 25	839 78	37 10	1,092 05
July	35 35	927 99	47 76	....	50 34	109 50	1,170 94
August	227 81	....	812 76	....	136 19	91 30	1,268 06
September	....	219 20	207 11	....	144 87	15 20	586 38
October	....	384 77	533 48	....	598 90	....	1,517 15
November	....	1,084 75	187 72	....	165 46	....	1,437 93
December	....	1,027 38	18 15	294 89	47 99	1 50	1,389 91
1912.							
January	....	383 67	382 76	....	399 60	....	1,166 03
February	....	....	172 96	2,876 80	185 00	....	3,234 76
March	17 50	1,309 23	469 00	34 50	91 83	....	1,922 06
Totals	5,015 91	6,455 75	3,852 52	3,252 44	3,303 40	311 00	22,191 02
Head Office Collections.							
1911.							
April	....	....	....	....	224 44	....	224 44
May	178 40	....	....	....	822 49	....	1,000 89
June	888 81	....	....	....	306 85	....	1,195 66
July	....	....	....	....	359 72	....	359 72
August	....	....	....	....	257 91	....	257 91
September	....	....	....	....	1,065 95	....	1,065 95
October	....	....	....	....	557 55	....	557 55
November	....	....	....	....	303 38	....	303 38
December	....	....	....	....	296 31	....	296 31
1912.							
January	....	....	....	....	80 30	....	80 30
February	....	....	....	....	178 23	....	178 23
March	....	....	....	....	380 52	....	380 52
Total	1,067 21	....	....	....	4,833 65	....	5,900 86
Grand Total	6,083 12	6,455 75	3,852 52	3,252 44	8,137 05	311 00	28,091 88

SCHEDULE B.—Showing the sawmills operating within the Calgary Agency under Government License for the Fiscal Year ending March 31, 1912.

No.	Mill Owner.	Location of Mill.	Berth No.	Kind of Power.	Horse Power.	Capacity per 10 hours.	Species of Timber cut.	Lumber.			Log Count.		
								Manufactured Ft. B.M.	Sold Ft. B.M.	On hand Ft. B.M.	Logs Cut.	Logs Manufactured.	Logs on hand.
1	Vernon N. De Mille.....	Priddis.....	1218	Steam..	20	8,000	Spruce.....	....	....	29,695	4,229	....	24,052
2	McDonald, McDonald & Frith.........	Blairmore ..	1157	" ..	100	30,000	Fir and spruce......	1,373,200	928,914	444,286	....	34,327	....
3	Messrs. Carter & McEwen	Red Deer...	1100	" ..	75	30,000	Spruce and pine.....	2,031,858	1,577,200	903,627	107,481	42,899	126,842
4	Eau Claire & Bow River Lumber Co............	Calgary	468	" ..	100	35,000	Fir, spruce and pine.	2,029,743	1,634,119	395,624	135,254	71,041	135,254
5	Lineham Lumber Co.	Okotoks....	1292	" ..	45	15,000	" " ..	1,153,065	1,153,065	....	64,986	28,646	138,437
6	Pennyfather, Grant & Great West Lumber Co.......	Red Deer...	253	" ..	75	30,000	Spruce and pine.. ..	2,031,859	1,577,198	2,279,316	10,423	42,900	42,124
7	Thomas Quigley.........	Cochrane. ..	1299	" ..	40	10,000	" "	590,000	462,000	168,000	....	10,377	440
8	Eau Claire & Bow River Lumber Co.	Calgary	318E.F.H.I.J.K and 417	" ..	100	35,000	Fir, spruce and pine.	3,015,076	2,215,725	4,233,343	102,551	99,607	124,417
9	Lineham Lumber Co.	High River.	579	" ..	80	30,000	" " ..	3,572,705	4,797,964	1,061,107	106,088	87,111	141,739
10	" "	Okotoks. ...	1327	" ..	45	15,000	" " ..	732,326	732,326	....	....	21,539	....
11	" "	"	1384	" ..	45	15,000	" " ..	1,267,962	409,658	858,304	....	44,066	6,496
12	Hon. Peter McLaren.....	Blairmore ..	36A	" ..	100	30,000	Fir and spruce......	3,289,301	422,040	3,024,138	....	57,771	38,444
13	Lineham Lumber Co. ...	Okotoks. ...	569	" ..	45	15,000	" "	15,040	15,040	....	....	500	....
14	" "	High River.	1124	" ..	45	15,000	Fir, spruce and pine.	27,042	27,042	....	8,098	665	8,098
15	Vernon N. De Mille......	Priddis... ..	1389	" ..	20	8,000	" " ..	....	....	....	2,500	....	3,002
								21,129,177	15,952,291	13,397,440	541,610	541,449	789,345
	Hon. Peter McLaren.....	Blairmore ..	36A	" ..	....	....	Dry Mining timber..	12,733 l.ft.	12,733 l.ft.	....	....	....	....
	" "	" ..	36A	" ..	....	....	" " ..	44,454 b.m.	44,454 b.m.	....	....	. ....	....
	" "	" ..	36A	" ..	....	....	Dry cordwood......	72 cords	72 cords	....	....	... .	....

SCHEDULE B.—Showing the sawmills operating within the Calgary Agency under Government License, &c.—*Concluded.*

No.	Average per Log Ft. B.M.	Railway Ties.			Laths.			Average Price of Lumber per ft.	Number of Returns made.	Date of Last Return.	Remarks.
		Manufactured.	Sold.	On hand.	Manufactured.	Sold.	On hand.				
								$ cts.			
1	....	....	....	....	....	....	....	....	4	March 31, '12.	
2	40·00	....	....	....	....	....	....	18 30	2	Sept. 30, '11.	Not possible to obtain returns.
3	47 36	....	....	....	....	....	....	18 74	4	March 31, '12.	
4	28·57	....	....	....	....	....	....	20 13	4	" 31, '12.	4832 posts mfd and sold.
5	40·63	....	....	....	....	....	....	15 09	2	" 31, '12.	
6	47·36	....	....	....	1,571,450	612,400	959,050	18 74	4	" 31, '12.	
7	5 ·85	....	....	....	....	....	....	15 00	4	" 31, '12.	
8	30·27	....	....	....	....	....	....	21 03	4	" 31, '12.	4202 posts sold.
9	41·00	....	....	....	244,250	248,850	....	16 99	4	" 31, '12.	Laths over run 4600.
10	34·00	....	....	....	....	....	....	17 40	4	" 31, '12.	
11	28·77	10,046	10,014	32	....	....	....	16 03	4	" 31, '12.	
12	56·94	....	....	....	....	....	....	17 31	2	Sept. 30, '11.	
13	30·08	....	....	....	....	....	....	17 46	4	March, 31, 12.	
14	40 66	....	....	....	....	....	....	17 73	4	" 31, '12.	
15	....	....	....	....	....	....	....	....	4	" 31, '12.	
	40·19	10,046	10,014	32	1,815,700	861,250	959,050	17 69	54		
								1 06 15 00 95			

W. E. TALBOT, *Crown Timber Agent.*

SCHEDULE C.—Showing the mills (including the portable mills) operating within the Calgary Agency, under Government Permits, for the Fiscal Year ending March 31, 1912.

o.	Mill Owner.	Location of Mill.	Berth No.	Species of Timber Cut.	Lumber.			Log Count.		
					Manuf'd Ft. B. M.	Sold Ft. B. M.	On hand Ft. B. M.	Logs Cut.	Logs Manufact'd.	Logs on hand.
1	W. R. Dobbie	On Berth	1326	Spruce	....	....	....	....	......	....
2	Arthur G. Spooner	"	1406	Spruce	Nil.	118,000	70,600	Nil	Nil.	Nil.
3	Charles Stubbs	"	1396	Spruce and fir	25,080	81,960	58,814	"	178	"
4	P. W. Hallvarson	Black Diam'nd	1615	Spruce	Nil.	43,245	97,828	"	Nil.	"
5	N. T. Hagen	On Berth	1586	Spruce	"	8,215	36,112	"	"	4,700
6	John Schrader	"	1587	Spruce and pine	"	146,765	Nil.	"	"	Nil.
7	Francis DuRocher	"	1610	Spruce	136,273	148,158	6,000	"	2,959	"
8	Royal Collieries	"	1624	Spruce and pine	832,533	678,907	306,023	570	6,763	"
9	Great West Lumber Co	Red Deer	1852	Spruce and pine	Nil.	Nil.	Nil.	9,672	Nil.	17,630
10	Foothills Lumber Co	On Berth	1655	Spruce and pine	"	230,211	35,929	7,090	"	7,090
11	G. R. Pelletier	"	1711	Spruce and pine	1,748,369	1,136,812	755,506	46,431	43,826	13,104
12	Adam Sturm	"	Sturm Sale No. 1	Spruce and pine	112,717	108,717	4,000	533	3,244	644
13	Eau Claire & Bow River Lumb. Co.	Calgary	1708	Spruce and pine	Nil.	Nil.	627,199	Nil.	Nil.	19,566
14	Carbondale Lumber Co.	On Berth	1746	Spruce and pine	640,121	284,349	376,611	"	8,802	Nil.
15	Holmes & Sherwood	"	1673	Spruce	405,351	493,571	51,929	12,535	10,520	3,715
16	J. T. Johanneson	"	1769	Spruce and pine	120,000	14,577	105,423	9,360	3,650	5,710
17	Featherstone & Mason	"	Permit 535	Spruce	101,734	59,361	42,373	3,335	3,085	250
18	O. E. S. Whiteside	Coleman	1715	Spruce and pine	1,195,461	307,805	887,656	14,744	14,456	288
					5,317,639	3,860,653	3,462,003	104,290	97,483	72,697
					L. ft.	L. ft.	L. ft.			
....	G. R. Pelletier	On Berth	1711	Mining props	24,155	25,034	29,553	....	....	....
....	J. K. Cram	"	1787	"	34,498	23,020	56,590	2,957	1,871	4.673

SCHEDULE C.—Showing the mills (including the portable mills) operating within the Calgary Agency, under Government Permits, &c.—*Con.*

No.	Average per Log Ft. B. M.	Railway Ties.			Average price of Lumber per M. ft.	Number of Returns made.	Date of last Return.	Remarks.
		Manufactured.	Sold.	On hand.				
					$ cts.			
1	....	....	....	....	....	....	....	
2	Nil.	Nil.	Nil	Nil.	19 00	4	March 31, 1912........	10,461 ft. B. M. Sold during ¼ ending 31/3/11 and not shown in last annual report.
3	14·09	"	"	"	13 13	4	" 31, 1912	
4	Nil.	"	"	"	16 15	4	" 31, 1912	
5	"	"	"	"	12 00	4	" 31, 1912	
6	"	"	"	"	12 50	2	September 30, 1911	Berth cancelled.
7	46·05	"	"	"	12 25	4	March 31, 1912........	
8	123·10	"	"	"	13 00	4	" 31, 1912........	
9	Nil.	"	"	"	Nil.	4	" 31, 1912........	
10	"	"	"	"	15 03	4	" 31, 1912........	
11	39·91	37,174	28,221	8,953	16 49	4	" 31, 1912........	
12	31·74	Nil.	Nil.	Nil.	12 23	3	December 31, 1911........	
13	Nil.	"	"	"	Nil.	1	March 31, 1912........	
14	72·72	"	"	"	13 75	4	" 31, 1912........	
15	38·51	"	"	"	18 27	4	" 31, 1912........	
16	32·87	"	"	"	17 00	4	" 16, 1912........	
17	32·97	"	"	"	12 25	3	" 31, 1912........	
18	82·04	"	"	"	12 00	4	" 31, 1912........	
	51·70	37,174	28,221	8,953	14 33	61		
....	....	....	....	....	....	....		
...	....	....	....	....	....	4	March 31, 1912........	Used in Mine.

SCHEDULE D.—General Office Return of the Crown Timber Agency at Calgary, for Fiscal Year ending March 31, 1912.

Particulars.	Number, etc.	As compared with previous year.		Remarks.
		Increase.	Decrease.	
Letters received	80,959	3,270	....	Including Dom. Lands.
Letters written	85,748	8,098	....	" "
Permits subject to dues issued	22	Nil.	Nil.	
Free permits issued	416	....	127	
Seizures made	10	5	....	
Mill returns received and verified	115	....	....	
Mills operating under Government license	15	Nil.	Nil.	
" " " " permits.	18	"	"	
Quantity of lumber manufactured under license	21,129,177	3,093,679	....	
Quantity of lumber sold under license	15,952,291	569,735	....	
" " on hand, "	13,397,440	5,139,295	....	
Average price at which lumber sold	$16 01	$2 07	....	
Hay permits issued	347	70	....	

No. 26d.

REPORT OF THE CROWN TIMBER AGENT AT PRINCE ALBERT.

Department of the Interior,
Crown Timber Office,
Prince Albert, Saskatchewan, July 13, 1912.

J. W. Greenway, Esq.,
Commissioner of Dominion Lands,
Ottawa, Ont.

Sir,—I beg to submit herewith a report of the business of the Prince Albert Crown Timber Agency for the year ending March 31, last.

The sales of lumber manufactured under license amount to 47,516,621 ft. B.M., an increase of 13,571,816 ft. B.M. over last year. The average price was $19.45 per thousand feet, a decrease of $1.12½ per thousand ft. The total manufacture of lumber under license amounted to 77,469,595 ft. B.M., being 43,524,790 in excess of previous year. During the past winter, 1,057,233 more logs were cut than last year. This logging was done principally by the Prince Albert Lumber Company and the Big River Lumber Company on the Timber Berths held by them that had been burnt over, in order to save the timber. The mill at Big River has been in operation for some time now and the Finger Lumber Company's mill is also completed and in operation, and I expect a large increase in manufacturing of lumber this year.

The number of permits issued is 1,509 against 1,149 for the previous year. These permits cover the following quantities of timber:—

Lumber, feet B.M., 6,103,426; logs, lineal feet, 1,062,488; cordwood, 33,312¾ cords; fence posts, 396,875; fence rails, 1,631,605; roof poles, 323,733; shingles, 500,000; railway ties, 14,300.

The number of seizures made during the year was 55, and covered the following quantity of timber:—Lumber, feet B.M., 4,769,881; logs, lineal feet, 4,412; lath, 363,600; shingles, 200,000; posts, 200; cordwood, 168; roof poles, 90.

The number of hay permits issued for the year amounted to 290, covering 4,194 tons.

The total receipts for the year amounted to $52,989.29.

Your obedient servant,

W. S. McKECHNIE,
Crown Timber Agent.

SCHEDULE A.—Statement of Receipts from Crown Timber Agency at Prince Albert, for fiscal Year ending March 31, 1912.

Month.	Ground rent under license.	Royalty dues under license.	Permit fees, dues and rental.	Seizures.	Hay permits fees and dues.	Fire guarding fees.	Totals.	Remarks.
1911.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	
April	2,100 27	2,172 49	680 85	....	327 90	....	5,281 51	
May	5,121 53	....	91 61	1,765 80	73 10	....	7,052 04	
June	....	....	43 53	1,059 85	213 30	....	1,316 68	
July	....	5,069 27	60 79	52 00	112 60	....	5,294 66	
August	985 36	1,556 00	1,387 85	2,511 08	85 60	....	6,475 89	
September	....	....	712 88	9 95	20 00	....	742 83	
October	....	6,979 49	810 66	145 48	80	....	7,936 43	
November	195 30	....	1,073 82	177 80	1 20	....	1,448 12	
December	....	603 25	3,327 60	96 35	60	....	4,027 83	
1912.								
January	614 20	6,104 08	1,003 07	819 57	3 30	....	8,544 22	
February	....	146 95	1,072 63	784 00	....	16 83	2,033 91	$13 50 fee for gr. plan and notes included.
March	....	....	1,336 46	411 45	....	....	1,747 91	
Totals	9,016 66	22,631 36	11,551 75	7,833 33	838 40	16 83	51,902 03	$13 50 fee for gr. plan and notes included.
Head Office Collections—								
1911.								
April	205 37	....	....	....	....	....	205 37	
May	....	....	....	....	....	....	....	
June	....	....	....	....	....	....	....	
July	....	....	....	....	....	....	....	
August	....	....	....	....	....	....	....	
September	....	....	....	....	....	....	....	
October	80 00	222 22	25	....	....	....	302 47	
November	186 39	....	....	....	....	....	186 39	
December	....	....	....	....	....	....	....	
1912.								
January	....	....	....	....	....	....	....	
February	....	....	....	....	....	....	....	
March	393 03	....	....	....	....	....	393 03	
Totals	864 79	222 22	25	....	....	....	1,087 26	
Grand Totals	9,881 45	22,853 78	11,552 00	7,833 33	838 40	16 83	52,989 29	$13 50 fee for gr. plan and notes included.

Schedule B.—Showing the Sawmills operating within the Prince Albert Agency under Government License for the Fiscal Year ending March 31, 1912.

Number.	Mill Owner.	Location of Mill.	Berth No.	Kind of Power.	Horse Power.	Capacity per 10 hours.	Species of Timber cut.	Lumber.			Log Count.		
								Manufactured.	Sold.	On hand.	Logs cut.	Logs Manufactured.	Logs on hand.
								Ft. B.M.	Ft. B.M.	Ft. B.M.			
1	Pr. Albert Lumber Co. Ltd.	Prince Albert.	66A	Steam	1,200	160,000	Spruce				340,250		340,250
2	" "	"	474				"	18,042,740	18,042,740		141,423	294,305	141,423
3	" "	"	633				"	6,701,174	5,935,743	765,431		94,531	48,189
4	" "	"	9 Block 2.				"				17,099		24,899
5	" "	"	9 Block 3.				"	44,686	1,450,723			758	
6	" "	"	698				"				28,364		78,113
7	" "	"	729				"	8,104,966		8,104,966		123,360	
8	" "	"	868				"				259,624		259,624
9	" "	"	945				"	6,042,588		6,024,588	50,200	91,970	80,203
10	" "	"	946				"	2,960,589	2,960,589			45,061	
11	" "	"	691				"				41,334		41,334
12	Sturgeon Lake Lumb. Co.	Sturgeon Lake	1011	Steam	200	35,000	"					3,423	
13	Saskatchewan Lumb. Co.	Crooked River	977	Steam	250	35,000	"	5,551,357	5,112,245	5,182,119	26,003	102,243	54,635
14	" "	"	961				"	1,139,293	1,471,516		78,816	19,419	85,756
15	" "	"	1640				"	2,621,400	2,621,400		35,392	43,690	35,392
16	Finger Lumber Co. Ltd.	Le Pas	1274	Steam	700	100,000	"	564,148	353,914	150,234	212,023	4,000	213,023
17	" "	"	920				"				132,925		132,925
18	A. Ballantine	"	1366				"						
19	Big River Lumb. Co. Ltd.	Big River	1048	Steam	1,600	200,000	"				634,075		634,075
20	" "	"	1049				"	25,756,654	9,567,751	16,554,112	628,331	658,876	852,437
	Totals							77,469,595	47,516,621	36,799,450	2,625,862	1,481,636	3,052,278

Schedule B.—Showing the Sawmills operating within the Prince Albert Agency under Government License for the Fiscal Year ending March 31, 1912—*Concluded.*

Number.	Average per Log.	Railway Ties.			Laths.			Average Price of Lumber per M. ft.	Number of Returns made.	Date of Last Return.	Remarks.
		Manufactured.	Sold.	On hand.	Manufactured.	Sold.	On hand.				
	Ft. B.M.							$ cts.			
1									4	March 31, 1912	
2	61·3				3,003,300	3,003,300		19 62	4	"	
3	70·9				1,548,600	1,548,600		17 81	4	"	
4									4	"	
5	58·9				6,200	6,200		20 08	4	"	
6									4	"	
7	65·7				1,726,550	1,496,250	230,300		4	"	
8									4	"	
9	65·7								4	"	
10	65·7							18 17	4	"	
11									4	"	
12									4	"	Logs burned.
13	54·3					574,250	816,500	20 00	4	"	
14	58·7							20 65	4	"	
15	66							18 50	4	"	
16	126							22 35	4	"	
17									4	"	
18		2,300	8,839	43,461					4	"	
19									4	"	
20	38·7							17 84	4	"	
	52·3	2,300	8,839	43,461	6,284,650	6,628,600	1,046,800	19 45	80		

Schedule C.—Showing the mills (including the Portable Mills) operating within the Prince Albert Agency, under Government Permits, for the fiscal year ending March 31, 1912.

Number.	Mill Owner.	Location of Mill.	Berth No.	Species of Timber cut.	Lumber.			Log Count.			Average per log.	Average Price of lumber per M. feet.	Number of Returns made.	Date of Last Return.	Remarks.
					Manufactured.	Sold.	On hand.	Logs cut.	Logs manufactured.	Logs on hand.					
					Ft. B.M.	Ft. B.M.	Ft. B.M.				Ft. B.M.	$ cts.			
1	Carrot Riv. Lumber Co	S.W 2-48-13 W 2.	1554	Spruce	....	215,926	....	....	....	....	....	17 66	3	Sept. 30, '11	Berth cancelled, 27-11-11.
2	Cowan Construction Co	Mistatim	1702	"	87,500	87,500	....	....	1,250	....	70	....	3	Nov. 30, '11	Berth cancelled, 24-1-12.
3	W. H. Morrow	New Osgoode	1590	"	385,369	446,101	....	4,123	6,096	....	63·2	13 75	3	Dec. 31, '11	Lumber used in construction.
4	John Pring	Tisdale	1721	"	615,742	533,249	82,493	13,500	15,500	....	39·7	17 00	4	" 31, '11	
5	Ross Bros.	Turtle Lake	1556	"	....	61,000	55,000	....	....	4,329	....	20 37	4	" 31, '11	Shortage in inventory, including 19,321 feet.
6	George Garner	30-51-4 W. 3	1561	"	381,030	285,128	239,202	....	7,710	4,750	49·4	18 67	5	Mar. 31, '12	
7	Joseph Otte	34-49-5 W. 3	1605	"	....	....	....	....	....	....	....	....	....	....	Only shingles manufactured.
8	Shell River Lumber Co	15-50-27 W. 2	876	"	310,000	362,285	143,084	....	11,056	7,000	28·4	20 00	4	Mar. 31, '12	
9	M. W. Cazakoff	4-36-31 W. 2	1641	"	85,824	....	96,384	420	820	....	104·7	....	4	" 31, '12	
10	Chas. Shaw	Melfort	1611	"	350,243	199,846	200,395	9,976	6,356	3,620	55·1	13 50	5	" 31, '12	Berth cancelled, 27-4-12.
11	H. R. Knudson	25-40-15 W. 2	1630	"	226,218	235,816	42,400	6,725	4,931	2,836	45·88	14 93	4	" 31, '12	
12	R. E. Smythe	W. 3-4-78	1627	"	105,610	74,245	33,035	5,976	2,544	4,252	41·05	17 80	5	" 31, '12	
13	L. Hennickson	N. E. 33-48-18 W. 2.	1777	"	35,596	35,596	....	1,300	1,300	....	27·38	13 00	2	Sept. 30, '11	Berth cancelled, 18-11-11, including 10,000 feet burned.
14	Prince Albert Lum. Co	Prince Albert	1840	"	....	....	....	....	....	....	....	....	1	Mar. 31, '12	
15	" "	"	1841	"	....	....	....	....	....	....	....	....	1	" 31, '12	
16	" "	"	1843	"	....	....	....	5,290	....	5,290	....	....	1	" 31, '12	
17	" "	"	1844	"	....	....	....	9,577	....	9,577	....	....	1	" 31, '12	
18	A. E. Cunningham	N ½-36-50-14 W. 2	1906	"	....	....	....	....	....	....	....	....	1	" 31, '12	
19	E. R. Person	N. E. ¼-35-55-25 W. 3	1855		459,137	65,633	393,504	9,864	9,864	....	46·55	....	1	" 31, '12	
20	Warren Shaw	5-43-11 W. 2	1955	"	....	....	....	....	....	....	....	....	....	No returns yet	
21	Joseph Otte	N. E. ¼-10-50-4 W. 3	1878	"	....	....	....	....	....	....	....	....	....	....	Only shingles manufactured.
22	John Weiss & Co.	31-55-21 W. 3	1880	"	....	....	....	....	....	....	....	....	....	No returns yet	
23	C. Hemmelgan	E. ½ 16-55-22 W 3.	1898	"	....	....	....	....	....	....	....	....	....	"	
				Totals.	3,042,269	2,602,325	1,285,497	66,751	67,427	41,654	45·12	18 67	52		

SCHEDULE D.—General Office Return of the Crown Timber Agency, Prince Albert, for the Year ending March 31, 1912.

Particulars.	Number, &c.	As compared with previous year. — Increase.	As compared with previous year. — Decrease.
Letters received	23,031	....	3,924
Letters written	29,118	6,536	
Permits subject to dues issued	329	22	
Free permits issued	1,208	366	
Seizures made	55	17	
Mill returns received and verified	328	28	
Mills operating under government license	20	2	
" " " permits	23	5	
Quantity of lumber manufactured, under license	77,469,595	43,524,790	
" " sold under license	47,516,621	13,860,420	
" " on hand, under license	36,799,450	29,952,704	
Average price at which lumber sold	$19.45	....	$1.12½
Hay permits issued	425	51	

No. 26e.

REPORT OF THE CROWN TIMBER AGENT AT NEW WESTMINSTER.

DEPARTMENT OF THE INTERIOR,
DOMINION LANDS AND CROWN TIMBER OFFICE,
NEW WESTMINSTER, B.C., May 17, 1912.

J. W. GREENWAY, Esq.,
Commissioner of Dominion Lands,
Ottawa, Ont.

SIR,—I have the privilege of submitting herewith the annual report of this agency for the fiscal year ended March 31, last, with which is enclosed statement on form No. 'A.' showing the revenue collected to be $59,412.71. This shows a decrease of $61,103.20 from the preceding year, which must not, however, be taken to indicate that the lumbering industry has been less active during the last fiscal year than in the preceding one, instead this is explained by the reduced area within this agency, the eastern boundary of which was fixed in the month of June, 1911, at the dividing line between townships 10 and 11, west of the 6th meridian, instead of the dividing line between townships 15 and 16, west of the 6th meridian, also by the fact that in the fiscal year ended March 31, 1911, the sum of $34,536.12 was received on account of bonus on timber berths sold, while last year the revenue from this source was only $3,866.43. Form 'B.' gives a list of the holders of timber berths being operated together with the extent of such operations, and shows that from twenty-eight timber berths, there were produced the following:—27,413,121 feet B.M. of saw logs, 699½ cords of wood, 38,825 lineal feet of piling and poles, and 8,286$\frac{25}{48}$ cords of shingle bolts. The quantity of saw logs cut shows an increase of 6,589,396 feet B.M. over the previous year, while the other classes of timber show a substantial increase. Under permits issued to homesteaders the following timber was cut:—1,065,679 feet B.M. of saw logs, 4,570 lineal feet of poles and piling, 4 cords of wood, 1,000 pieces of railway ties and 300 fence posts. From lands sold and where the timber has been reserved to the Crown, there was taken under permits issued under Section 14 of the regulations for the survey, administration, disposal and management of Dominion lands within the railway belt in the province of British Columbia, 6,366,589 feet B.M. of saw logs, 1,961 cords of shingle bolts, 29,285 lineal feet of piling and poles, 200 cords of wood and 1,000 pieces of fence posts. Permits issued under Section 47 of the Timber Regulations to cut shingle bolts on vacant Dominion lands accounted for 1,054 cords. The following quantity of timber was seized on account of having been cut in trespass:—4,428,485 feet B.M. of saw logs, 3,267 cords of shingle bolts, 84,920 lineal feet of piling and poles, 8,933 pieces of railway ties and 7½ cords of wood. In addition to the above there was cut under permit from lands being cleared at Coquitlam lake in connection with the building of a dam for power purposes at that point, 6,980,853 feet B.M., making the grand total cut of timber from lands within this agency, 46,254,727 feet B.M. of saw logs, 911 cords of wood, 15,596 cords of shingle bolts, 157,600 lineal feet of piling and poles, 9,933 pieces of railway ties and 1,300 pieces of fence posts. Form 'D.' shows the general work of the agency to compare favourably with former years. Since my appointment as crown timber agent on January 22, last, I have in the course of my duties, touched upon all parts of the agency and everywhere there is abundant evidence of the general prosperity which prevails, all industries working to their full capacity and many, particularly sawmills, operating both night and day in order to cope with the demands. In this report I wish to state that on taking over the duties of my office, I found the work up to date and Mr. Walmsly, who acted as agent for about one year prior to my entering the service, has since given me most valuable advice and assistance in connection with the duties. The other members of the staff have continued to give most careful and conscientious attention to their respective duties.

Your obedient servant,

E. W. BECKETT,
Crown Timber Agent.

SCHEDULE A.—Statement of Receipts from Crown Timber Agency at New Westminster, B.C., for Fiscal Year ending March 31, 1911.

Month.	Bonus under License.	Ground rent under License.	Royalty Dues under License.	Permit Fees, Dues and Rental.	Seizures.	Grazing Lands Rentals.	Totals.	Remarks.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	
1911.								
April	1,266 43	5,467 18	1,083 48	4 00			7,821 09	
May		9,891 84	1,561 07	2,648 24	1,247 47		15,348 62	
June		517 92	6 21	523 39	209 52		1,257 04	
July		1,583 95	2,107 45	2,743 22	329 50	32	6,764 44	
August		606 24	580 65	865 97			2,052 86	
September		1,360 92	1 83	358 50	505 00		2,226 25	
October		26 15	2,167 02	2,891 81	281 10		5,366 08	
November		2 10	1,446 77	594 26	477 18		2,520 31	
December		1,444 00	262 20	443 45	289 00		2,438 65	
1912.								
January			3,475 28	1,260 24	304 60		5,040 12	
February		53 36	198 27	187 40	1,077 59		1,516 62	
March	2,600 00	1,481 45	1,456 75	538 77	23 10		6,100 07	
Totals	3,866 43	22,435 11	14,346 98	13,059 25	4,744 06	32	58,452 15	
Head Office Collections—								
1911.								
April					100 00		100 00	
May		839 98					839 98	
June								
July					2 50	7 90	10 40	
August								
September								
October								
November								
December						36	36	
1912.								
January								
February								
March		9 82					9 82	
Totals		849 80			102 50	8 26	960 56	
New Westminster	3,866 43	22,435 11	14,346 98	13,059 25	4,744 06	32	58,452 15	
Head Office		849 80			102 50	8 26	960 56	
Grand Total	3,866 43	23,284 91	14,346 98	13,059 25	4,846 56	8 58	59,412 71	

Schedule B.—Showing the Sawmills operating within the New Westminster, B.C., Agency under Government License for the Fiscal Year ending March 31, 1912.

Number.	Mill Owner.	Location of Mill.	Berth No.	Kind of Power.	Horse Power.	Capacity per 10 hours	Species of Timber cut.	Lumber.		
								Manufactured.	Sold.	On hand.
								Ft. B.M.	Ft. B.M.	Ft. B.M.
1	E. H. Heaps & Co.	Ruskin	X 268 and 314	Mill under construction.			Fir, cedar, spruce, hemlock and pine	14,737,486	14,737,486	Nil.
2	Harrison River Mills T. & T. Co.	Harrison River	534	Steam	750	125,000	Fir, cedar and hemlock	1,191,422	1,191,422	"
3	B. C. Mills T. & T. Co.	New Westminster.	86 and 304	"	450	60,000	" "	201,120	201,120	"
4	Brunette Sawmill Co.	Sapperton	R. 44, 77, 319 and 526	"	500	90,000	" "	4,098,405	4,098,405	"
5	British Canadian Lumber Co.	Vancouver	110 and 111	"	750	125,000	" "	142,000	142,000	"
6	Campbell River Lumber Co.	Hazelmere	B. and 234	"	125	40,000	" "	522,449	522,449	"
7	Vancouver Power Co.	No mill.	O. and 299				" "	5,143,058	5,143,058	"
8	W. R. Spencer	"	270				" "	373,664	373,664	"
9	M. G. Jeffris.	"	368				Fir	Nil.	Nil.	"
10	Brittingham & Young Co.	"	510				Fir, cedar and hemlock	327,638	327,638	"
11	John Oliver	"	334				Fir and cedar	20,918	20,918	"
12	Leonard Lampert	"	Z.				Fir	Nil.	Nil.	"
13	Independent Lumber Co.	"	296				Fir and cedar	62,565	62,565	"
14	Vachon & Dunn.	"	A.				"	10,000	10,000	"
15	J. D. Kennedy.	"	223				"	162,750	162,750	"
16	A. R. Baker	"	52				"	86,294	86,294	"
17	North Pacific Lumber Co.	Barnet	55	Steam	750	125,000	Maple and alder	Nil.	Nil.	"
18	Lamont Bros.	Coquitlam	P. C. 286	"	100	30,000	Fir and cedar	33,352	33,352	"
								27,413,121	27,413,121	......

SCHEDULE B.—Showing the Sawmills operating within the New Westminster, B.C., Agency under Government License, &c.—*Con.*

Number.	Log Count.			Average per log.	Cords of Wood.			Lineal Feet of Piling and Poles.			Shingle Bolts.			Average price of Lumber per M. ft.	Number of Returns made.	Date of Last Return.	Remarks.
	Logs. cut.	Logs Manufactured.	Logs on hand.		Manufactured.	Sold.	On hand.	Manufactured.	Sold.	On hand.	Manufactured.	Sold.	On hand.				
				Ft. B.M.													
1	21,306	21,306	Nil.	691·71	Nil.	Nil.	Nil.	2,034	2,034	Nil.	663¾	663¾	Nil.	$14.50 per M	12	Mar. 31, 1912	
2	1,836	1,836	"	648.92	"	"	"	Nil.	Nil.	"	Nil.	Nil.	"	"	4	"	
3	202	202	"	995·64	"	"	"	"	"	"	"	"	"	"	8	"	
4	3,442	3,442	"	1,190·70	176	176	"	23,725	23,725	"	514 11/16	514 11/16	"	"	20	"	Shingle Bolts $5 per cord.
5	106	106	"	1,339·62	Nil.	Nil.	"	Nil.	Nil.	"	1,400¾	1,400¾	"	"	8	"	" "
6	813	813	"	642·68	"	"	"	450	450	"	3,704½	3,704½	"	"	8	"	" "
7	6,128	6,128	"	839·27	165	165	"	80	80	"	302½	302½	"	"	8	"	" "
8	1,962	1,962	"	190·45	Nil.	Nil.	"	Nil.	Nil.	"	428⅓	428⅓	"	"	4	"	" "
9	Nil.	Nil.	"	....	328½	328½	"	"	Nil.	"	Nil.	Nil.	"	$3 per cord..	4	"	" "
10	398	398	"	823·21	Nil.	Nil.	"	8,250	8,250	"	"	"	"	$14.50 per M	4	"	Piling 10c. per lineal ft.
11	109	109	"	191·90	"	"	"	2,756	2,756	"	"	"	"	"	4	"	
12	Nil.	Nil.	"	....	"	"	"	1,530	1,530	"	"	"	"	10c. per l. ft.	4	"	
13	26	26	"	2,406·34	"	"	"	Nil.	Nil.	"	"	"	"	$14.50 per M	4	"	
14	....	....	......	....	"	"	"	"	"	"	"	"	"	"	4	"	
15	93	93	"	1,750·00	"	"	"	"	"	"	"	"	"	"	4	"	
16	84	84	"	1,027·31	"	"	"	"	"	"	351	351	"	"	4	"	
17	Nil	Nil.	"	....	30	30	"	"	"	"	Nil.	Nil.	"	$3 per cord..	4	"	
18	197	197	"	1,709·45	Nil.	Nil.	"	"	"	"	921	921	"	$5 per cord..	....	....	Shingle mill 5 permits issued.
	36,702	36,702	......	....	699½	699½	......	38,825	38,825	....	8,286 25/48	8,286 25/48					

E. W. BECKETT,
Crown Timber Agent.

SCHEDULE D.—General Office Return of the Crown Timber Agency, New Westminster, B.C., for Fiscal Year ending March 31, 1912.

Particulars.	Number, &c.	As compared with previous year.	As compared with previous year.
		Increase.	Decrease.
Letters received	3,639	488	....
Letters written	4,206	....	205
Permits subject to dues issued	49	4	....
Free permits issued	1	1	....
Seizures made	31	....	12
Mill returns received and verified	823	....	25
Mills operating under government license	7	Nil.	Nil.
" " permits	Nil.	Nil.	Nil.
Quantity of Lumber manufactured, under license	27,413,121	6,589,396	....
" " sold, under license	27,413,121	6,589,396	....
" " on hand, under license	Nil.	Nil.	Nil.
Average price at which lumber sold	$14.50	$0.50	....
Hay permits issued	Nil.	Nil.	Nil.

No. 26f.

REPORT OF CROWN TIMBER AGENT AT KAMLOOPS.

Department of the Interior,
Dominion Lands and Crown Timber Office,
Kamloops, B.C., July 16, 1912.

J. W. Greenway, Esq.,
Commissioner of Dominion Lands,
Ottawa, Ont.

Sir,—I have the honour to submit a report of the Kamloops Crown Timber Agency for the Fiscal year ended March 31, 1912. The below mentioned statements have been forwarded to the department under separate cover, viz:—

Schedule 'A.' being a statement of receipts from Timber, Grazing and Irrigation Branch.

Schedule 'B.' showing the sawmills operating under government license.

Schedule 'D.' general office return.

From these it will be seen that 46,912,258 feet B.M. of logs were cut on Dominion berths within this agency during the season of 1911-12, the royalty dues thereon amounting to $25,602.56. Ground rentals on timber berths approximated $6,871.74.

Five seizures, covering 500,814 feet B.M. of logs and 62 cords of wood, were made and fines amounting to $445.94 collected in connection therewith.

The average selling price of lumber in this district was $14.63 per thousand.

During the year, 180 permits, covering 5,101,443 feet B.M. of sawlogs, 11,585 fence rails, 5,535 fence posts, and 5,876 cords of wood, were issued to settlers applying. From this source was derived a revenue of $2,446.73, constituting an increase of $838.85 as compared with 1910-11. Twelve permits covering 207 tons of hay, were also issued to settlers.

Two new timber berths were sold at this agency during the past year, realizing the sums of $3,747 and $494 respectively, which was practically the upset price in each case. One berth offered was not sold.

A general comparison of the receipts of the Timber Branch for 1911-12 with those for former years, cannot be made at this date, as, prior to June, 1911, the timber berths now dealt with by the Kamloops agency were administered from the Crown Timber Agency at Revelstoke, B.C., which has been closed.

Owing to the heavy stock carried prior to 1911 by the licensees in some cases, a few of the latter were compelled to curtail operations somewhat during the past winter, with the result that a number of berths were not cut over sufficiently to comply with the requirements of the department. This necessitated charging increased rental on such berths as had been held for a period over that allowed for inactivity by the department. These stocks have since been reduced, and I am led to believe that an improvement in the sales, resulting in increased operations, will take place in the near future.

Your obedient servant,

W. C. COWELL,
Crown Timber Agent.

SCHEDULE A.—Statement of Receipts from Crown Timber Agency at Kamloops, for Fiscal Year ending March 31, 1912.

Month.	Bonus under License.	Ground Rent under License.	Royalty Dues under License.	Permit Fees, Dues and Rental.	Seizures.	Grazing Lands Rentals.	Hay Permits Fees and Dues.	Registration	Totals.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
1911.									
April				19 10	139 00	792 88	8 00	2 00	960 98
May				26 85		375 76	3 60	2 00	408 21
June		14 69	1,722 86	151 40		993 55	8 50		2,891 00
July	1,920 53	6,615 25	3,418 63	170 05	10 00	240 64	17 82		12,392 92
August		4 13	8,094 10	35 18	4 50	527 76	1 50		8,667 17
September		9 45	18 98	334 65		712 45	2 50		1,078 03
October		29 35	6,660 74	136 00		751 67			7,577 76
November		8 00		265 00		489 21		2 00	764 21
December			1,346 20	273 00		692 75			2,311 95
1912.									
January			282 88	103 50		581 15			967 53
February	2,367 50	9 05	3,410 61	685 50		370 96			6,843 62
March		133 82	647 56	246 50	292 44	643 66		2 00	1,965 98
Totals.	4,288 03	6,823 74	25,602 56	2,446 73	445 94	7,172 44	41 92	8 00	46,829 36
Head Office Collections—									
1911.									
April						31 55			31 55
May						62 32			62 32
June						58 69			58 69
July						48 70			48 70
August						208 49			208 49
September						16 73			16 73
October						161 03			161 03
November						69 48			69 48
December			200 80			44 92			245 72
1912.									
January		10 25	1 91			7 93			20 09
February		29 20				68 45			363 65
March		75 31				39 86			47 17
Totals.		312 76	202 71			818 15			1,333 62
Grand Total	4,288 03	7,136 50	25,805 27	2,446 73	445 94	7,990 59	41 92	8 00	48,162 98

NOTE.—Bonuses are collected at Head Office.

Schedule B.—Showing the Sawmills operating within the Kamloops Agency under Government License for the Fiscal Year ending March 31, 1912.

No.	Mill Owner.	Location of Mill.	Berth No.	Kind of Power.	Horse Power.	Capacity per 10 hours.	Species of Timber cut.	Lumber.
								Manufactured.
								F. B. M.
1	Bowman Lumber Co., Ltd.	Comaplix.	88 112 113 114 127 186 207	Steam	750	65 M	Cedar, pine, spruce, hemlock, fir, cottonwood.	11,206,430
2	Columbia River Lumber Co., Ltd	Golden.	421 493 16 258 541	Electric & Steam.	1,300	135 M	Fir, cedar, spruce	2,364,307
3	Dominion Sawmills & Lumber, Limited.	Three Valley—Taft.	243 349	Steam	500	65 to 70 M	Ceder, pine, fir, hemlock	17,940,063
4	A. R. Rogers Lumber Co., Ltd	Enderby	237 238 540	"	500	80 M	Hemlock, tamarack, cedar, fir, pine.	13,326,301
5	Arrow Lakes Lumber Co., Ltd	Arrowhead.	333 499	"	1,000	100 M	Fir, hemlock, cedar, spruce, pine.	1,237,713
6	Monarch Lumber Co.	Savona	171 436	"	220	40 M	Cedar, hemlock, fir, pine, spruce.	345,687
7	Lee Lumber Co., Ltd	Wigwam	118	"	100	30 M	" "	
8	Independent Lumber Co.	Savona	437	"	25	17 M	Fir, jackpine	491,757
9	R. R. Hall	Arrowhead	316	Water	125	40 M	Cedar, pine, hemlock, fir	
								46,912,258

SCHEDULE B.—Showing the Sawmills operating within the Kamloops Agency under Government License, &c.—*Concluded.*

No.	Log Count.	Average per Log.	Railway Ties.	Cordwood.	Telegraph Poles.	Shingles.	Average Price of Lumber per M. feet.	Number of Returns made.	Date of Last Return.	Remarks.
	Logs Cut.		Manufactured.	Cords Cut.	Manufactured.	Manufactured.				
		Ft. B.M.					$ cts.			
1	71,351	157	....	....	....	....	12 00	4	March 31, 1912.	
2	32,087	73·6	20,906	331	....	....	16 41	4	" 31, 1912.	
3	111,297	161·1	....	....	....	....	13 55	4	" 31, 1912.	Nothing cut.
4	96,601	137·9	....	....	894	....	11 55	3	Dec. 31, 1911.	Cutting for March 1912 quarter has been approximated and included in these totals.
5	17,153	72·1	....	....	....	....	18 25	4	March 31, 1912.	
6	2,278	151·8	....	....	....	....	15 32	....	" 31, 1912.	
7	....	....	....	....	....	....	....	4	....	Some cutting during the quarter ended December 31, 1911, but cannot obtain returns so far.
8	6,657	73·9	....	....	....	....	15 32	4	March 31, 1912.	No lumber cut.
9	....	....	....	....	....	2,807	....	4	" 31, 1912.	No logs were cut on berth 316 during the year ended March 31, 1912.
	337,424	139·3	20,906	331	894	2,807	....	....		

SCHEDULE D.—General Office Return of the Crown Timber Agency, Kamloops, for Fiscal Year ending March 31, 1912.

Particulars.	Number, &c.	As compared with previous year. Increase.	As compared with previous year. Decrease.
Letters received	Combined with land office work.		
Letters written			
Permits subject to Dues issued	74	7	
Free Permits issued	96	23	
Seizures made	5	5	
Mill Returns received and verified	450		
Mills operating under Government License	8		
" " " Government Permits	None.		
Quantity of Lumber manufactured, under License	46,912,258		21,037,946
" " sold, under License			
" " on hand, under License			
Average price at which Lumber sold	$14.63 per M.		$3.29
Hay permits issued	14		1

No. 26g.

REPORT OF THE INSPECTOR OF CROWN TIMBER AGENCIES.

OFFICE OF INSPECTOR OF DOMINION CROWN TIMBER OFFICES,
WINNIPEG, MANITOBA, July 1, 1912.

J. W. GREENWAY, Esq.,
Commissioner of Dominion Lands,
Ottawa, Ont.

SIR,—I beg to submit my annual report upon the business of my office as Inspector of Crown Timber Offices for the year ended March 31, 1912.

During the year I made a round of all the offices under my inspectorship, making a careful inspection of the same. My findings were reported to you at the time, which were generally favourable to the office inspected. The officials connected with the timber work I found were active in the discharge of their duties. This was particularly the case in respect to the timber inspectors. Collection of revenue has been sharply looked after, with the result that the amount of unpaid accounts at the end of the year is comparatively small, and, for the most part, amply secured. The activity of the inspectors in the field also had the effect of largely increasing the demand for timber permits and in bringing about a better observance of the law. The holders of licensed timber berths, who are conducting operations, are showing increased care in their cuttings, which are being carried on with the minimum amount of waste. A standing menace facing the lumber operator is that of fire. While every precaution is being taken by those holding valuable timber berths to guard against fire getting in their timber, still fires are of yearly occurrence. The present year has been a disastrous one for some of the berth-holders in northern Saskatchewan, who, it is reported, lost heavily by fires. Operations on the burnt area were carried on last winter as extensively as was practicable, by which upwards of 100,000,000 feet of fire-killed timber was cut. The Forestry Branch of the department is doing much to bring about in the west a better observance of the laws pertaining to the setting out of fires, but, so long as the woods are open to squatters and summer travelling by traders, hunters, prospectors and others, to come and go at will, without the knowledge of the department, fires will occur, with little chance of the offender being brought to account. To my mind, greater care should be taken to keep settlers from entering upon timber lands adjacent to valuable belts of timber. It is alleged that the destructive fires of last year in northern Saskatchewan, referred to, originated with a settler burning the slash, in the clearing of his homestead. A settler entering upon land that requires to be cleared of timber before it can be cultivated is starting out badly handicapped in the race for success. It costs from twenty-five to fifty dollars per acre in the prairie provinces to clear land of timber for cultivation, and in British Columbia from one hundred to five hundred dollars per acre, and, as these lands are invariably only taken up by settlers with little or no capital to start with, very slow progress towards earning support from the land is made. While there are open prairie lands to be had as homesteads, the local agents should exercise every care to see that timbered lands of the class reserved from entry by the Act, are not parted with as homesteads.

REVENUE.

The revenue derived from all sources in connection with timber and grazing for the year, amounted to $419,440.93, which sum will be increased by the payments made direct to the department at Ottawa. This is a better showing than last year in which were included large sums paid in on the purchase of timber berths, of which few were sold during the year under review, and those being of comparatively small value. A large increase in revenue is shown under the head of dues on timber cut under permits. This is accounted for chiefly in the large amount of railway construction timber cut under permits issued to contractors of the Grand Trunk Pacific and Canadian Northern railways for use in lines being built in western Alberta.

LUMBER.

The demand for lumber and other products of timber throughout the west, during the year, has been good. The prices were somewhat higher than those of last year, from $2 to $4 per M. feet on some grades, while on others the increase was greater.

From statistics, carefully gathered, I am able to give you the amount of lumber marketed in Manitoba, Saskatchewan and Alberta, during the year, and for comparison the figures for the preceding year are given:—

	1911-12. Feet.	1910-11. Feet.
From British Columbia mills..	692,000,000	620,000,000
From Western Ontario (pine)..	150,000,000	140,000,000
From United States (free)..	236,000,000	122,000,000
From United States (dutiable)..	47,000,000	Not known.
Manufactured at mills in Manitoba, Alberta, and Saskatchewan (spruce).	156,110,144	135,524,202
	1,281,110,144	1,017,524,202

In addition to the lumber imported from the United States, there were imported 67,000,000 lath and 35,000,000 shingles, which products, under the tariff, are free of duty. There also came in from the United States and the province of Ontario 10,000,000 feet B.M. of maple flooring and 6,000,000 feet of other hardwoods.

The licensees of timber berths within the railway belt in British Columbia continue to operate mainly in provincial timber. The cut on Dominion lands shows a falling off of nearly 15,000,000 feet as compared with the preceding year's cutting. The shipments, however, of lumber from that province into Manitoba, Saskatchewan and Alberta exceed in amount about 7,000,000 feet over last year.

I append the usual statements which are to be read in connection with the report, namely:—

'A.'—Summary of work performed and revenue.

'B.'—Showing extent of timber products manufactured, sold and in stock.

'C.'—Timber material covered by permits issued.

'D.'—Showing number of hay permits issued and amount of hay covered thereby.

As will be seen from the last named statement, permits covering 153,702 tons of hay were issued to settlers, upon which a revenue of $18,916.08 was collected.

The hay permit regulations are not working satisfactorily and needed amendments should be made therein before entering upon another season. I took the matter up with the several local agents in the west, and, after getting their views as to the requirements, framed, what I considered, the regulations which should be adopted. The draft of form was left at the department by me early in the year for consideration.

In addition to the work devolving upon me in connection with the timber interests of the department, I have, as you are aware, been employed on special service by the Minister in the inspection of Dominion Lands offices and in holding investigations on land matters.

Respectfully submitted,

E. F. STEPHENSON,
Inspector of Crown Timber Agencies.

STATEMENT 'A.'—Summary of work performed at the respective Crown Timber offices during the year ended March 31, 1912, showing transactions under various heads and amount of revenue collected.

Agency.	Timber and Grazing Branch.								School Lands Branch.				Revenue.	
	Bonus.	Ground Rent.	Royalty on Sales.	Timber Permits.	Timber Seizures.	Hay Permits.	Grazing Rentals.	Sundries.	Timber Permits.	Hay Permits.	Grazing Rentals.	Sundries.	$	cts.
Battleford	..	....	.. ..	683	7	241	1	....	5	112	33	..	2,163	46
Brandon	..	...	.... .	186	4	61	2	....	....	107	14	2	1,137	61
Calgary	..	25	41	515	10	131	115	....	1	216	70	..	24,072	75
Dauphin	1	1	.....	1,840	39	115	.....	....	16	118	3	..	13,179	88
Edmonton	7	69	1067	1,945	55	589	......	568	34	385	40	31	81,174	54
Estevan	.	...	......	121	....	106	4	....	....	196	5	1	1,165	45
*Grande Prairie	..	.. .	......	22	....	35	....	3	....	7	6	..	311	35
Humboldt	..	....	......	195	1	150	.....	15	....	233	66	12	1,521	83
Kamloops	3	92	49	180	5	14	349	....	....	.....	....	..	46,897	36
Lethbridge	.	....	... .	125	1	12	81	....	....	50	13	..	5,326	62
Medicine Hat	.	...	......	665	....	241	390	1	....	60	32	..	16,981	16
Moosejaw	..	...	....	1,769	....	355	72	16	....	304	31	..	4,951	66
New Westminster	4	260	70	50	30	......	1	....	....	......	....	..	58,452	15
Peace River	..	....	.....	41	....	49	....	....	....	1	....	..	407	30
Prince Albert	..	18	22	1,645	49	301	......	1	29	143	23	2	54,214	31
Red Deer	..	....	......	227	2	182	.....	18	6	275	13	15	2,043	42
Regina	..	...	......	9	....	46	......	1	7	323	50	9	1,608	31
Saskatoon	..	....	.....	34	...	288	......	9	1	321	14	11	1,698	25
Swift Current	..	....	......	769	....	269	177	25	...	228	41	1	4,241	19
Yorkton	..	....	.....	385	7	106	.....	....	....	136	13	..	1,106	65
Winnipeg	3	117	122	1,466	46	209	3	29	142	335	6	14	96,785	68
Totals	18	582	1371	12,872	256	3,500	1,195	686	241	3,550	473	98	419,440	93
Previous year	28	563	363	12,115	272	2,555	844	53	83	2,907	567	27	417,525	36

*Office opened July, 1911.

E. F. STEPHENSON,
Inspector of Crown Timber Agencies.

STATEMENT 'B.'—Showing amount of manufacture and sale of Timber Products by holders of Timber Berths on Dominion Lands cut under yearly license during the Departmental Year ending March 31, 1912, according to returns made.

Agency.	LUMBER.			LATH.			RAILWAY TIES.	SHINGLES.			SAW LOGS.		
	Manufactured.	Sold.	On Hand.	Manufactured.	Sold.	On Hand.	Sold.	Manufactured.	Sold.	On Hand.	Pcs. cut.	Man'f'd Mill.	On Hand.
Calgary	21,129,177	15,952,291	13,397,440	1,815,700	861,250	959,050	10,046	....	....	....	541,610	541,449	789,345
Edmonton	16,472,600	14,300,211	5,518,994	1,954,633	1,704,633	250,000	360,242	....	....	....	328,141	319,178	241,875
New Westminster...	27,413,121	27,413,121	....	....	....	....	....	49,716,000	49,716,000	....	36,702	36,702	rtns B.C. made by scale.
Prince Albert.......	77,469,595	47,516,621	36,799,450	6,284,650	6,628,600	1,046,800	8,839	....	....	....	2,625,862	1,481,636	3,052,278
Kamloops..........	46,912,258	46,912,258	....	....	....	....	....	....	....	....	337,424	n't k'own	....
Winnipeg	51,466,930	48,137,980	26,432,551	8,288,270	4,737,420	4,730,650	11,088	85,000	35,000	50,000	1,079,827	987,775	1,159,407
	240,863,681	200,232,482	82,148,435	18,343,253	13,931,903	6,986,500	390,215	49,801,000	49,751,000	50,000	4,949,566	3,366,740	5,242,905
Previous year. . .	203,239,661	210,120,568	40,584,365	18,957,193	23,766,363	2,720,200	200,989	37,948,000	37,862,350	856,650	3,716,243	2,646,377	3,968,881

CUT FOR THE TRADE.

Agency.	LUMBER.			LATH.			RAILWAY TIES.	SHINGLES.			SAW LOGS.		
	Manufactured.	Sold.	On Hand.	Manufactured.	Sold.	On Hand.	Sold.	Manufactured.	Sold.	On Hand.	Pcs. cut.	Man'f'd Mill.	On Hand.
Calgary..........	5,317,639	3,860,653	3,462,003	....	....	....	37,174	....	....	....	104,290	97,483	72,697
Edmonton..........	20,138,704	11,347,549	12,852,656	4,624,014	4,063,525	561,489	100,040	558,500	245,750	312,750	353,808	368,478	111,552
New Westminster...	12,046,673	....	....	....	....	....	....	....	....	....	....	....	....
Prince Albert.	3,042,269	2,602,325	1,285,497	....	....	....	....	....	....	....	66,751	67,427	41,654
Kamloops	5,226,345	5,226,345	....	....	....	....	....	....	....	....	....	....	....
Winnipeg	8,213,344	7,166,169	2,197,341	....	....	....	1,367	....	....	....	214,629	192,885	39,842
	53,984,974	30,203,041	19,797,497	4,624,014	4,063,525	561,489	138,581	558,500	245,750	312,750	739,478	726,273	265,745
Previous year.	27,347,629	35,818,714	7,468,981	478,741	479,741	....	18,520	630,000	503,250	....	588,612	513,069	257,166

E. F. STEPHENSON,
Inspector Crown Timber Agencies.

STATEMENT 'C.'—Timber Material Covered by Permits Issued at the respective Agencies, principally to Homestead Settlers, during the Year ending March 31, 1912.

Agency.	Lumber and Logs.	Roof Poles.	Fence Posts.	Fence Rails.	Cordwood Cords.	Mine Props.	Shingles.	Railway Ties.	Telegraph Poles.	Lath.
	Ft. B.M.					L. Ft.				
Battleford	3,527,238	113,367	136,019	137,367	2,198				2,995	
Brandon	76,500	550	1,000		2,662					
Calgary	2,256,131	54,105	127,160	165,312	5,346					
Dauphin	2,979,474	10,450	37,690	18,320	9,069			6,153	80	
Edmonton	13,524,638	412,848	555,150	2,152,348	1,626½	264,539	25,000	1,936,322	19,144	
Estevan		8,275	10,425	3,450	285					
Grande Prairie	171,924	8,250	9,130	42,720	600					
Humboldt	1,088,713	15,100	22,000	76,010	328					
Kamloops		2,608	5,535	11,585	5,876		5,065,000	6,000	2,304	
Lethbridge	285,948	12,830	22,480	29,910	576					
Medicine Hat	4,311,285	140,708	175,245	552,759	8,918					
Moosejaw	611,775	327,742	584,235	895,705	13,898					
New Westminster			1,000		239		19,475,000	1,000	29,289	
Peace River	442,216	11,200	13,360	58,480	470					
Prince Albert	7,322,172	323,733	396,875	1,631,605	35,163		500,000	14,300		
Red Deer	1,178,662	37,975	51,180	173,415	1,874			300		
Regina		400	500	2,000	66					
Saskatoon	82,154	2,856	5,300	14,000	300					
Swift Current	718,000	136,903	217,650	410,940	7,237					
Yorkton	1,532,500	1,568	10,720	6,300	949					
Winnipeg	2,589.620	17,080	50,505	34,070	85,005			53,866		
(Seizures)	1,918,730	118	5,500		13,841			7,975	240	1,047,900
	44,617,680	1,638,660	2,438,659	6,416,326	196,530	264,539	25,065,000	2,019,916	54,052	1,047,900
Comparative Statement year ending March 31, 1911	65,408,595	1,446,595	2,704,721	5,102,625	186,838	35,000	30,852,000	1,015,150	23,038	

E. F. STEPHENSON,
Inspector Crown Timber Agencies.

STATEMENT 'D.'—Showing the number of Hay Permits and the amount of hay covered thereby issued to settlers from the different Dominion Land Offices in Manitoba, Saskatchewan, Alberta and British Columbia for the year ending March 31, 1912.

Agency.	Dominion Lands.		School Lands.		Dues and Fees Collected.
	No. Pts. issued.	Tons Hay.	No. Pts. issued.	Tons Hay.	$ cts.
Battleford	242	5,430	237	4,781	1,368 45
Brandon	31	590	48	925	368 80
Calgary	128	2,495	206	5,964	887 80
Dauphin	113	3,271	130	1,834	527 65
Edmonton	589	11,204	385	7,399	2,478 36
Estevan	106	2,011	196	4,322	884 35
Grande Prairie	35	1,160	7	173	176 00
Humboldt	150	2,140	233	4,082	713 90
Kamloops	12	207	....	....	41 92
Lethbridge	12	245	44	734	93 80
Medicine Hat	237	14,745	58	1,413	776 55
Moosejaw	355	8,006	384	8,371	2,083 10
New Westminster	....	....	....	....	....
Prince Albert	290	4,194	135	2,392	1,246 95
Peace River	50	2,045	....	....	256 40
Red Deer	182	4,545	277	7,366	1,361 55
Regina	46	906	323	7,147	1,065 65
Saskatoon	287	4,395	322	5,755	1,477 25
Swift Current	267	5,542	228	4,337	1,129 70
Yorkton	100	1,642	148	2,437	587 50
Winnipeg	202	3,901	326	6,529	1,390 40
	3,434	79,074	3,685	75,961	18,916 08
Comparative statement for year ended March 31st, 1911	2,592	78,925½	2,787	65,516½	13,919 10

E. F. STEPHENSON,
Inspector Crown Timber Agencies.

No. 26h.

REPORT OF THE INSPECTOR OF RANCHES.

DEPARTMENT OF THE INTERIOR,
OFFICE OF THE INSPECTOR OF RANCHES,
CALGARY, ALBERTA, April 22, 1912.

J. W. GREENWAY, Esq.,
Commissioner of Dominion Lands,
Ottawa, Ont.

SIR,—I have the honour to submit herewith my report of the transactions of the office of the Inspector of Ranches for the Fiscal Year ending March 31, 1912.

During the year 5,660 quarter-sections were inspected, which necessitated travelling 6,893 miles by wagon and 6,839 miles by rail.

From April 1 to 20, I was engaged in the distribution of government seed grain for the Immigration Department.

The past winter of 1911-12 has been an unusually severe one in certain portions of the grazing area in Alberta and Saskatchewan. There was a heavy fall of snow about November 1, and from that time to about March 31 repeated snowfalls and continual cold weather made it a difficult problem for the ranchers to pull through without severe loss. The loss along the Red Deer River was not so great, as there was abundance of feed procurable and most of the stock were fed during the cold weather. In the Cypress Hills country and along the Frenchman river in Southern Saskatchewan the snow was very deep and crusted and the loss in these districts has been heavy. In fact in southern Saskatchewan and southern Alberta the weather has been the severest and the winter has been the worst experienced for many years according to old-time ranchers.

It was extremely difficult and in some cases impossible to make inspections during the winter months, but from information secured and from notes taken on former inspections a good number of the applications have been dealt with. Spring has now opened up and the prospects are good for the coming year.

Your obedient servant,

CHAS. GRAYSON,
Inspector of Ranches.

No. 27.

REPORT OF THE SUPERINTENDING ACCOUNTANT.

DEPARTMENT OF THE INTERIOR,
ACCOUNTS BRANCH, OTTAWA, May 31, 1912.

W. W. CORY, Esq., C. M. G.,
Deputy Minister of the Interior,
Ottawa, Ont.

SIR,—I have the honour to submit herewith statements of revenue collected from various sources during the fiscal year ended March 31, 1912, as follows:—

A.—Dominion lands, including Yukon..	$ 3,973,259 74
B.—Ordnance lands..	11,566 46
C.—School lands..	1,594,533 96
D.—Registration fees, Yukon..	1,066 05
E.—Fines and forfeitures, N.W.T..	341 00
F.—Casual revenue..	32,824 65
G.—Seed grain repayments..	119,634 13
H.—Fines under Immigration Act..	10,169 48
I.—Chinese immigration revenue..	971,339 00
	$ 6,714,734 47

A statement of revenue on account of Dominion Lands (marked J.) shows the receipts monthly, classified under sub-heads.

Statement (marked K.) shows a comparison between the receipts on account of revenue of the previous twelve months.

Statement (marked L.) shows the Chinese immigration revenue collected by the Departments of Trade and Commerce and the Interior for the fiscal year 1911-12, by ports.

The gross receipts from all sources for the fiscal year 1911-12 amount to $6,714.-734.47, an increase of $1,621,594.02 over the receipts of the previous year.

Your obedient servant,

CHAS. H. BEDDOE,
Superintending Accountant.

A.—DOMINION Lands Revenue (Cash and Scrip) for the Fiscal Year ending March 31, 1912.

Agencies.	Cash.	Scrip.	Total.
YUKON TERRITORY.	$ cts.	$ cts.	$ cts.
Sales of lands	3,752 01	....	3,752 01
Rentals of land	11,435 28	....	11,435 28
Map sales, office fees, &c	95 00	....	95 00
Timber dues	18,271 69	....	18,271 69
Hay permits	169 00	....	169 00
Coal lands	575 25	....	575 25
Mining fees	69.035 01	....	69,035 01
Export tax on gold	100,606 29	....	100,606 29
Free certificates for export of gold	118 50	....	118 50
Hydraulic leases	15,602 55	....	15,602 55
Dredging leases	2,860 96	....	2,860 96
Homestead fees	30 00	....	30 00
Rent of water power	10,689 62	....	10,689 52
Interim receipt account	211 50	....	211 50
Survey fees	1,045 00	....	1,045 00
	234,497 66	....	234,497 66
DOMINION LANDS AGENCIES.			
Battleford	86,077 95	181 82	86,259 77
Brandon	6,432 76	....	6,432 76
Calgary	322,107 43	....	322,107 43
Dauphin	17,229 45	....	17,229 45
Edmonton	128,941 89	378 66	129,320 55
Estevan	157,025 59	....	157,025 59
Grande Prairie	7,055 78	....	7,055 78
Grouard	11,372 87	480 00	11,852 87
Humboldt	27,907 95	90 88	27,998 83
Kamloops	16,273 01	....	16,273 01
Lethbridge	191,242 65	....	191,242 65
Medicine Hat	521,205 93	640 00	521,845 93
Moosejaw	323,534 51	....	323,534 51
New Westminster	20,510 30	....	20,510 30
Prince Albert	38,476 85	....	38,476 85
Red Deer	77,565 08	....	77,565 08
Regina	29,351 44	....	29,351 44
Saskatoon	292,854 12	....	292,854 12
Swift Current	266,608 78	514 29	267,123 07
Winnipeg	62,110 83	971 34	63,082 17
Yorkton	28,838 11	....	28,838 11
	2,632,723 28	3,256 99	2,635,980 27
CROWN TIMBER AGENCIES.			
Battleford	378 90	....	378 90
Brandon	496 89	....	496 89
Calgary	19,643 83	....	19,643 83
Dauphin	10,586 64	....	10,586 64
Edmonton	81,547 39	....	81,547 39
Estevan	129 95	....	129 95
Grande Prairie (nine months)	5 50	....	5 50
Grouard	152 65	....	152 65
Humboldt	79 75	....	79 75
Kamloops	40,122 47	....	40,122 47
Lethbridge	216 00	....	216 00
Medicine Hat	214 90	....	214 90
Moosejaw	485 55	....	485 55
New Westminster	59,404 13	....	59,404 13
Prince Albert	52,120 56	....	52,120 56
Red Deer	311 65	....	311 65
Regina	5 75	....	5 75
Revelstoke (three months)	21,748 79	....	21,748 79
Saskatoon	28 75	....	28 75
Swift Current	226 25	....	226 25
Winnipeg	94,030 32	....	94,030 32
Yorkton	460 30	....	460 30
	382,396 92	....	382,396 92

A.—DOMINION Lands Revenue (Cash and Scrip) for the Fiscal Year ending March 31, 1912—*Concluded.*

Agencies.	Cash.	Scrip.	Total.
MISCELLANEOUS.	$ cts.	$ cts.	$ cts.
Rocky Mountains Park	52,027 63		52,027 63
Jasper Park	3,492 85		3,492 85
Yoho Park	491 08		491 08
Waterton Lakes Park	284 68		284 68
Buffalo Park	158 32		158 32
Elk Island Park	43 18		43 18
Survey fees	29,578 15		29,578 15
Irrigation fees	793 72		793 72
Map sales, office fees, &c	8,053 71		8,053 71
Fees Board of Examiners, D.L.S.	1,400 00		1,400 00
Mining fees	6,083 41		6,083 41
Grazing lands	69,519 41	1,520 00	71,039 41
Hay permits	9,754 22		9,754 22
Coal lands	439,926 67		439,926 67
Dredging leases	1,160 00		1,160 00
Stone quarries	9,938 86		9,938 86
Rent of water-power	583 30		583 30
Suspense account	1,660 29		1,660 29
Sales of land	27,308 34		27,308 34
Homestead fees	20 00		20 00
Rentals	21 00		21 00
Petroleum	49,226 65		49,226 65
Sand, stone and gravel	11,421 55		11,421 55
Forestry branch, sale of trees, &c.	694 86		694 86
	723,641 88	1,5200 00	725,161 88
	3,973,259 74	4,776 99	3,978,036 73
Refunds	197,402 77	228 58	197,631 35
	3,775,856 97	4,548 41	3,780,405 38

CHAS. H. BEDDOE,
Superintending Accountant.

DEPARTMENT OF THE INTERIOR, ACCOUNTS BRANCH,
Ottawa, May 31, 1912.

B.—STATEMENT of Ordnance Lands Revenue for the Fiscal year ending March 31, 1912.

1911.	
April	$ 1,688 95
May	714 51
June	1,646 21
July	630 92
August	692 64
September	3,489 95
October	779 71
November	900 22
December	199 91
1912.	
January	365 15
February	448 04
March	10 25
	$11,566 46

CHAS. H. BEDDOE,
Superintending Accountant.

DEPARTMENT OF THE INTERIOR, ACCOUNTS BRANCH,
Ottawa, May 31, 1912.

C.—STATEMENT of Receipts on account of School Lands for the Fiscal Year ending March 31, 1912.

Month.	Manitoba School Lands.	Saskatchewan School Lands.	Alberta School Lands.	Total.
1911.	$ cts.	$ cts.	$ cts.	$ cts.
April	11,469 95	16,060 70	3,897 10	31,427 75
May	21,564 22	40,115 57	248,305 70	309,985 49
June	44,448 68	89,082 96	19,860 29	153,391 93
July	26,275 34	131,625 88	78,024 85	235,926 07
August	11,098 69	11,754 44	49,489 32	72,342 45
September	8,584 00	10,044 21	6,778 08	25,406 29
October	19,645 84	31,818 21	49,528 51	100,992 56
November	72,573 34	62,442 22	117,741 16	252,756 72
December	58,182 82	53,499 09	43,166 65	154,848 56
1912.				
January	28,365 35	40,398 57	19,387 27	88,151 19
February	32,040 16	21,885 05	18,414 37	72,339 58
March	44,294 10	32,773 52	19,897 75	96,965 37
	378,542 49	541,500 42	674,491 05	1,594,533 96

CHAS. H. BEDDOE,
Superintending Accountant.

DEPARTMENT OF THE INTERIOR, ACCOUNTS BRANCH,
Ottawa, May 31, 1912.

D.—STATEMENT of Registration Fees in the Yukon Territory for the Fiscal Year ended March 31, 1912.

Month.	District.	Registrar.	Amount.
1911.			$ cts.
April	Yukon	N. Laliberte	32 85
May	"	"	61 85
June	"	"	86 30
July	"	"	130 75
August	"	"	218 37
September	"	"	156 35
October	"	"	103 05
November	"	"	80 15
December	"	"	39 58
1912.			
January	"	"	48 75
February	"	"	21 80
March	"	"	86 25
			1,066 05

CHAS. H. BEDDOE,
Superintending Accountant.

DEPARTMENT OF THE INTERIOR,
ACCOUNTS BRANCH,
OTTAWA, May 31, 1912.

E.—STATEMENT of Fines and Forfeitures in the Northwest Territories for the Fiscal Year ended March 31, 1912.

Month.	From whom Received.	Amount.
1911.		$ cts.
May	John Henry	25 00
July	Sam Furneaux	50 00
August	E. Steersman	25 00
"	W. H. Bunting	25 00
"	Jos. Whitehead	25 00
"	Henry Ross	25 00
"	Lesperance Young	10 00
September	Louis Mouche	25 00
"	Fred. Kozack	5 00
October	H. S. Johnson	25 00
November	Thos. D. Grace	1 00
December	Andrew Robinson	26 00
"	Andrew Moatt	26 00
1912.		
February	W. J. Kitchekesik	1 00
"	Matthias Frank	2 00
March	Chas. Larone	25 00
"	Rex. V. Graham	10 00
"	Peter Ross	10 00
		341 00

CHAS. H. BEDDOE,
Superintending Accountant.

DEPARTMENT OF THE INTERIOR,
ACCOUNTS BRANCH,
OTTAWA, May 31, 1912.

F.—STATEMENT of Casual Revenue for the Fiscal Year ended March 31, 1912.

Name.	Particulars.	Amount.
		$ cts.
G.A. Johnston	Refund account Immigration expenses 1906-07	9 40
Breckenridge & Lund	" of cheques not used account Banff Waterworks and Sewerage	11,162 99
John Galt		1,311 47
Hinton Electric Company	Amount paid for boat returned by Geo. White-Fraser—Boundary Surveys	15 00
Great Northern Railway	Refund on freight charges on boundary monuments—Boundary Surveys	407 60
J. A. Dunn	Refund overcharge contingent account for January, 1911	1 00
Dionne & Low	Cheque for account not used refunded—Dominion Lands Forestry	121 00
O. V. Goulette	Refund of amount overpaid, 1910-1911—Parks	2 00
Grand Trunk Railway Co	" railway fare Andrew Mills deported	1995
" "	" " T. J. Morin	5 60
R. Laurier	" balance on hand March 31, 1911—Immigration	65 43
W. S. Larose	" " " "	25 00
Public Works Dept.	" amount paid for gravel, Yorkton Immigration Building—Immigration Expenses	16 50
"	Refund amount paid for lumber, Saskatoon Immigration Hall—Immigration Expenses	8 55
J. T. Blackford	Refund advance 1910-11—Forestry	43 00
Can. Pac. Ry. Co.	" of overpayment freight on cement—Parks	14 88
Western Canada Cement and Coal Company	" cement bags returned to Company—Parks	7 20
L. J. Gleeson	" amount overpaid for salary, March, 1911, through P. M. Sauder's irrigation account	1 94
Public Works Dept.	Refund amounts paid rent of Immigration Halls and fuel—Immigration	54 75
Rev. Sister Page	Refund amount overpaid *re* treatment of A. Anderson—Immigration	1 50
S. N. Foster	Refund salary cheque, March, not used—Immigration	46 45
J. W. Martin	" balance amount advanced Homestead Inspect. Whiteside, to pay for buggy—Dominion Lands Contingencies	25 00
R. E. Young	Refund travelling expenses account—Map Vote	31 40
J. S. Crawford	" account contingencies, Feb., 1911	4 25
J. R. Dickson	Proceeds sale of canoe, Le Pas—Forestry	6 00
G. M. Ullyot	Amount received for buggy and harness—Dominion Lands Income Contingencies	30 00
Walter Meyers	Salary cheque, February and March, not used	166 66
W. S. Larose	Balance expenses—Immigration	6 20
W. F. Nichol	Price for team horses—Dominion Lands Income	300 00
Comptroller of Yukon	Amount unclaimed estates in the Yukon for which no next of kin is known	30 90
A. W. Ashton	Refund account travelling expenses—Dominion Lands Income	54 60
H. Charlebois	Refund account expenses, 1906-07—Immigration	10 00
Government of B. C.	One-half cost deportation expenses of J. Sandvig—Immigration	57 57
John McInnes	Cheque dated July, 1910, not used—Dominion Lands Income	60 95
H. Charlebois	Refund account expenses, 1906-07—Immigration	5 00
Pauline & Co	Proceeds sale of old camp outfit—Astronomical Surveys	21 00
P. A. Carson	Balance on hand by E. M. Dann account advances, 1910-11—Water Power Investigations	29 11
Comptroller, Yukon	Amount unclaimed estates in Yukon	470 00
Albert Helmer	Refund balance on hand March 31, 1911—Dominion Lands Income	144 87
Dept. Public Works	Refund amount paid for coal *re* heating Edmonton Immigration Building	101 96
W. B. Rose	Refund *re* Immigration expenses, 1909-10 and 1910-11	62 19
Jas. Riddell	" amount overpaid him as farmer delegate in 1910-11 *re* expenses	9 73
H. Charlebois	Refund account expenses disallowed, 1907-08—Immigration	5 00
E. W. Brewster	Refund overpayment account expenses, 1909-10—Immigration	10 90

F.—STATEMENT of Casual Revenue for the Fiscal Year ended March 31, 1912—*Con.*

Name.	Particulars.	Amount.
		$ cts.
W. Wright	Proceeds sale of old buildings, Cypress Hill Forest reserves	304 83
Grand Trunk Ry.	Refund railway fares *re* deportation of 2 women	13 30
〃	〃 〃 Mrs. Tassé—Immigration Expenses	11 25
R. H. Nelles	Refund amount overpaid L. Puyjalon—Astronomical Surveys Vote, 1910 11.	140 00
Dept. Customs, U.S.	Refund duty charged A. G. Stewart, on goods shipped him from Dawson	7 17
J. S. Crawford	Refund balance of contingencies Thos. Duncan, 1910-11—Immigration	173 17
H. Hansen	Refund compensation for improvements	445 00
A. E. Hansen		230 00
A. E. & Hy. Hansen		2,065 00
H. Charlebois	〃 account expenses, 1906-07—Immigration	5 00
H. H. Abbott	〃 salary as caretaker Quarantine Reserves, Emerson, Man., for May, June, July and August, 1907	149 00
I. S. Doze	Refund proceeds sale of set of harness	10 00
V. Kast	〃 cheques January 13, 1911, not used—Forestry	2 00
J. Drew		2 00
L. C. Porteous	〃 cheque not used, compensation for improvements	3,000 00
P. A. Carson	〃 advances, A. T. Miller—Water Power Investigations	128 90
H. Charlebois	Refund account advances, 1906-07—Immigration	5 00
Public Works Dept	〃 amount paid for coal, Calgary Immigration Hall	12 70
〃	Refund amount paid for coal, Edmonton Immigration Hall—Immigration	60 24
H. Charlebois	Refund account advances, 1906-07—Immigration	5 00
Commissioner of Immigration, Winnipeg	Sale of old boards	7 55
Miss M. Schofield	Refund salary cheque, March, 1911—Civil Government Salaries	63 37
Mrs. M. Rutherford.	Refund salary cheque, October, 1910—Civil Government Salaries	83 12
〃	Refund salary cheque, November, 1910—Civil Government Salaries	83 12
〃	Refund salary cheque, December, 1910—Civil Government Salaries	83 12
〃	Refund salary cheque, January, 1911—Civil Government Salaries	83 12
Can. Pac. Ry. Co.	Refund cheque not used—Costs of Litigation	1,684 96
E. H. White	Refund railway fare of Jas. Pearce—Immigration	25 90
A. Link	〃 account expenses seed grain, 1911	2 15
W. F. Nichols	〃 〃 〃	17 40
W. S. Larose	〃 〃 〃	7 75
Edward Oliver	〃 balance contingencies account, March 31, 1911—Dominion Lands Income Contingencies	11 90
G. Thomson	Refund salary cheque not used—Dominion Lands outside service salaries	32 50
A. L. Robertson	Refund proceeds sale of canoe—Forestry	20 00
L. J. O. Chevrier	〃 ocean passage Madame Daix—Relief Distressed Canadians	14 60
E. H. Crockett	Refund amount charged for meals, 1910-1911	13 00
H. Charlebois	〃 account advances, 1906-07—Immigration	5 00
J. E. Robillard	〃 expenses, 1911	20 00
Wm. Ogilvie	〃 amount overpaid in 1910-11—Water Power Investigations	101 95
J. Bruce Walker	Refund sale of old straw and sheaves	77 00
Crown Timber Agent, Winnipag	Proceeds sale horse and harness of Inspector J. H. Thomson	100 00
R. G. Evans	Proceeds sale of travelling outfit of Inspector Yake	125 00
H. Charlebois	Account advances, 1906-07—Immigration	5 00
T. G. Rothwell	Salary cheques not cashed—Pay list account, 1908-09.	8 16
A. D. McRae		174 16
J. E. Robillard	Refund account expenses, 1910-11—Immigration.	40 00

F.—STATEMENT of Casual Revenue for the Fiscal Year ended March 31, 1912—*Con.*

Name.	Particulars.	Amount.
		$ cts.
J. B. Green	Refund cost of harness—Dominion Lands Income	10 00
Geo. Dickin	" sale of old horse used by Homestead Inspector Porteous—Dominion Lands Income	99 75
Thos. Fawcett	Refund proceeds sale of stove and canoe	25 00
H. Charlebois	" account expenses, 1906-07—Immigration	5 00
J. E. Robillard	" " 1910-11 "	21 31
Agt. Dom. Lds., Dauphin.	" sale of W. A. Davis' forestry outfit	41 25
W. D. Scott	" balance unexpended advance, 1910-1911	85 53
R. N. W. M. Police	Transportation and Maintenance of Lunatics, Yukon Territory	161 50
W. & L. E. Gurley	Refund *re* difference in value of Transits and duty on same	56 45
Finance Dept	Refund sale of old furniture, Glasgow Emigration office	13 02
G. H. Edgecombe	Refund sale of colt	20 00
Bank of Montreal (London)	Refund account inspection of Orphan children	6,839 27
David Cumming	Sale of old furniture, Glasgow Emigration Office	24 27
W. H. Stevens	Refund account sale of horse	50 00
R. G. Evans	" "	50 00
F. Kennedy	" "	40 00
		32,186 24
Refund— Chas. MacDonald, Public Administrator, Yukon Territory	Amount to credit of Khan Singh's estate	3 55
		32,182 69
Casual Revenue, Northwest Territories.		
F. McRae	Liquor Permit	2 00
W. Mason	"	2 00
Dr. A. Larose	"	2 00
A. Johnston	"	2 00
W. Kerr	"	2 00
F. Fischer	"	2 00
F. Thenult	"	2 00
Gerald Card	"	3 00
E. J. Pearce	"	2 00
T. C. Forbes	"	2 00
Hudson's Bay Co	"	33 80
" "	"	40 50
G. R. Ray	"	4 00
John Still	"	2 00
H. H. Ross	"	2 00
A. J. Bell	"	2 00
Mrs. A. J. Bell	"	2 00
Herbert Branigan	"	2 50
Dr. P. D. Tyerman	"	2 00
Fred. Fadner	"	2 00
D. Ogilvie	"	2 00
Bert Hubble	"	2 00
C. Thompson	"	3 00
C. H. Anderson	"	2 00
H. S. Johnson	"	2 00
E. J. Pearce	"	2 00
W. Ogilvie	"	5 00
L. Johnson	"	2 00
J. A. Crippen	"	80
E. W. Roberts	"	2 00
Sam Adams	"	2 00
W. B. Moore	"	2 00
D. A. McIvor	"	3 00
Percy H. Taylor	"	2 00
Rev. C. G. Fox	"	1 00
" "	"	2 00
" "	"	2 00
R. E. McKenzie	"	2 00
Henry South	"	80
Rev. Fr. Bonnald	"	2 00

F.—STATEMENT of Casual Revenue for the Fiscal Year ended March 31, 1912—*Con.*

Name.	Particulars.	Amount.
		$ cts.
E. M. South	Liquor Permit	2 00
E. C. Senkler	"	2 00
Capt. H. H. Ross	"	2 00
J. F. Drummond	"	80
H. L. Bélanger	"	2 00
J. H. Gordon	"	3 00
Hudson's Bay Co	"	16 00
Fred Beatty	"	2 00
E. C. Senkler	"	2 00
Chas. Hall	"	2 00
Robt. Kerr	"	3 00
H. Halcrow	"	2 00
Geo. Asmus	"	1 00
L. Marcellais	"	2 00
M. H. Hamilton	"	2 00
W. C. Lundie	"	2 00
A. P. Ducharmes	"	2 00
A. M. Camsell	"	5 00
D. McKenzie	"	2 00
Hudson's Bay Co	"	66 00
John Thomas	"	1 00
A. Lapensée	"	2 00
W. Kerr	"	2 00
A. A. Carroll	"	2 00
G. W. Burrell	"	2 00
Hudson's Bay Co	"	2 00
J. G. Morton	"	2 00
Wm. Carrière	"	2 00
Gerald Card	"	3 00
Geo. McPherson	"	2 00
J. Hurssell	"	4 00
Henry Sharp	"	2 00
J. F. Drummond	"	2 00
Hudson's Bay Co	"	28 00
G. T. Vincent	"	2 00
David Bone	"	2 00
Arthur Halcrow	"	2 00
John Halcrow	"	2 00
G. Halcrow, J. P	"	2 00
Employes Northern Trading Co	"	29 00
A. J. Bell	"	2 00
Mrs. Lily Bell	"	2 00
R. S. Salmon	"	0 80
Alex. Lontit	"	2 00
R. McLenaghan	"	2 00
P. Bulyea	"	1 00
I. Tourangeau	"	2 00
C. Cook	"	2 00
S. Clark	"	2 00
A. Nunn	"	2 00
H. Hooker	"	2 00
Employes Hudson's Bay Co	"	19 00
" " "	"	51 00
Total		461 00

Registration Fees, Northwest Territories.

	$ cts.
Registrar, North West Territories	6 00
" "	12 30
" "	32 00
" "	30 00
" "	16 00
" "	9 00
" "	22 70
" "	19 80
" "	1 50
" "	34 61
	183 91
Less Refunds	6 50
	177 41
Total Casual Revenue	32,824 65

CHAS. H. BEDDOE,
Superintending Accountant.

Department of the Interior,
Accounts Branch,
Ottawa, May 31, 1912.

G.—STATEMENT showing Repayments on Account of Seed Grain Advances and Relief Mortgages for the Fiscal Year ending March 31, 1912.

—	Seed Grain Advances, 1911.	Seed Grain Advances, 1909.	Seed Grain Advances, 1908.	Seed Grain Advances, 1905.	Seed Grain Advances, 1901.	Seed Grain Advances, 1900.	Seed Grain Advances, 1896.	Seed Grain Advances, 1895.	Seed Grain Advances, 1894.	Seed Grain to Settlers Account, '90.	Territorial Account, 1886-87-88.	Relief Mortgages of 1876.	Relief Advances.	Total.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
	35,117 75	13,531 67	53,617 59	225 59	37 81	59 50	296 01	1,665 48	1,356 41	589 03	1,452 82	3,588 29	8,096 18	119,634 13
Refunds......	336 25	158 78	2,098 60	24 27	....	40	....	31 93	77 35	70	52 18	3 00	228 97	3,012 43
	34,781 50	13,372 89	51,518 99	201 32	37 81	59 10	296 01	1,633 55	1,279 06	588 33	1,400 64	3,585 29	7,867 21	116,621 70

DEPARTMENT OF THE INTERIOR,
ACCOUNTS BRANCH,
OTTAWA, May 31, 1912.

CHAS. H. BEDDOE,
Superintending Accountant.

H.—STATEMENT of Fines under Immigration Act for the Fiscal Year ended March 31, 1912.

Month.	From whom received.	Amount.	
1911.		$	cts.
April	C. G. Greene	50	00
"	C. St. G. Yarwood	9	00
"	E. Wills	644	20
"	H. G. Lawrence	24	84
May	C. G. Greene	145	00
"	C. St. G. Yarwood	88	20
"	Alex. Fraser	200	00
"	S. H. Shannon	37	00
"	H. Bose	249	00
"	M. C. Goodsir	30	00
"	J. O'Callahan	75	00
"	J. A. McCallum	20	00
"	M. C. Goodsir	100	00
"	C. St. G. Yarwood	14	00
June	Henry Bose	369	00
"	M. C. Goodsir	60	00
"	C. G. Greene	25	00
"	C. E. Wilcox	80	00
"	J. O'Callahan	5	00
"	A. C. O'Neil	50	00
"	C. St. G. Yarwood	3	00
"	N. S. Dow	20	00
"	C. St. G. Yarwood	40	00
"	A. E. Skinner	10	00
"	E. Wells	321	40
July	C. G. Greene	20	00
"	T. D. Cowper	741	00
"	Alex. Fraser	445	00
"	H. Bose	5	00
"	Robt. Fleck	35	00
"	Robt. Fleck	25	00
"	C. St. G. Yarwood	2	00
"	H. Bell	50	00
"	C. St. G. Yarwood	96	00
"	M. Stigachick	50	00
"	F. S. Dilworth	40	00
August	H. Bell	50	00
"	J. W. Whitman	100	00
"	Police Magistrate, Windsor, Ont	10	00
"	C. St. G. Yarwood	40	00
"	C. St. G. Yarwood	50	00
"	C. St. G. Yarwood	70	00
"	C. G. Greene	50	00
"	Wm. Creery	45	00
"	C. St. G. Yarwood	110	00
September	C. St. G. Yarwood	13	00
"	Henry Bell	7	00
"	J. R. Thomson	31	00
"	C. St. G. Yarwood	40	00
"	C. St. G. Yarwood	40	00
"	Alex. Fraser	205	00
October	E. Wills	237	90
"	T. D. Cowper	266	00
"	Noble Binns	270	00
"	C. St. G. Yarwood	35	00
"	C. G. Greene	20	00
"	C. St. G. Yarwood	20	00
"	J. T. Mackay	10	00
"	W. J. Connor	175	00
"	M. C. Goodsir	189	00
November	J. C. Armstrong	20	00
"	J. H. Rodd	28	80
"	W. B. Cochrane	400	00
"	A. Morin	10	00
December	Alex. Fraser	262	00

H.—STATEMENT of Fines under Immigration Act for the Fiscal Year ended March 31, 1912—*Concluded.*

Month.	From whom received.	Amount.	
1911.		$	cts.
December	J. T. MacKay	180	00
"	C. St. G. Yarwood	10	00
"	H. Bose	75	00
"	W. B. Cochrane	40	00
"	C. St. G. Yarwood	30	00
"	C. St. G. Yarwood	180	00
"	Jos. Ryan	20	45
"	Michael Latis	15	00
"	Geo. Nickulus	15	00
1912.			
January	J. T. Mackay	50	00
"	T. D. Cowper	375	00
"	J. H. Rodd	9	60
"	E. Wills	287	10
"	J. H. Rodd		40
February	H. Bose	10	00
"	Jos. Ryan	59	55
"	Noble Binns	50	00
"	H. Bose	75	00
"	H. Bose	201	00
"	C. St. G. Yarwood	30	00
March	S. J. Dempsay	150	00
"	J. T. Mackay	287	00
"	J. T. Mackay	5	00
"	J. A. Potvin	2	00
"	C. St. G. Yarwood	52	00
"	W. B. Cochrane	40	00
"	H. Bell	60	00
"	R. E. Plewman	22	00
"	C. St. G. Yarwood	70	00
"	C. St. G. Yarwood	70	00
"	J. T. Mackay	45	00
"	H. Bose	169	00
"	T. D. Cowper	103	00
"	C. St. G. Yarwood	113	00
"	C. St. G. Yarwood	240	00
"	C. Pittindrigh	25	00
"	C. St. G. Yarwood	20	00
		10,169	48
	Refunds	50	00
		10,119	48

CHAS. H. BEDDOE,
Superintending Accountant.

DEPARTMENT OF THE INTERIOR,
ACCOUNTS BRANCH,
OTTAWA, May 31, 1912.

I.—STATEMENT of Chinese Immigration Revenue from October 2, 1911, to March 31, 1912.

Port.	Capitation Tax.	Registration Fees.	Penalties and Forfeitures.	Total Revenue.
	$ cts.	$ cts.	$ cts.	$ cts.
Victoria	640,000 00	1,916 00	....	641,916 00
Vancouver	269,000 00	1,408 00	1,550 00	271,958 00
Nanaimo	500 00	....	500 00	1,000 00
Montreal	46,500 00	7 00	950 00	47,457 00
Quebec	1,000 00	1 00	....	1,001 00
Halifax	2,000 00	3 00	....	2,003 00
North Sydney	....	2 00	....	2 00
St. John	3,000 00	2 00	....	3,002 00
Toronto	1,500 00	....	500 00	2,000 00
Ottawa	1,000 00	....	....	1,000 00
	964,500 00	3,339 00	3,500 00	971,339 00

NOTE.—The total revenue collected on account of Chinese Immigration for the Fiscal Year 1911-1912 was as follows:—

Collected by Trade and Commerce Department from 1st April, 1911, to 1st October, 1912	$2,078,383.00
Collected by Department of the Interior from 2nd October, 1911, to 31st March, 1912	971,339.00
Total 1911-1912	$3,049,722.00

For Chinese Immigration Revenue for the fiscal year 1911-12 by ports, see Statement L.

CHAS. H. BEDDOE,
Superintending Accountant.

DEPARTMENT OF THE INTERIOR,
ACCOUNTS BRANCH,
OTTAWA, May 31, 1912.

J.—STATEMENT of Gross Receipts on Account of Dominion Lands Revenue for the Fiscal Year ending March 31, 1912.

Month.	Homestead Fees.	Pre-emption and Purchased Homestead Fees.	Improvements.	General Sales of Lands.	Timber Dues.	Rental from Grazing Lands.	Export Tax on Gold, Mining fees, Hay, Coal Lands, &c.	Canadian National Parks.	Survey Fees.	Map Sales, Rental, Office Fees and Miscellaneous.	Total.
1911.	$ cts.	$ cts.	$ cts	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
April	46,050 00	12,670 00	16,935 88	91,817 00	59,019 53	4,513 23	46,700 98	6,985 13	119 95	2,822 98	287,634 68
May	43,070 00	11,990 00	18,083 55	73,361 83	61,889 40	5,277 39	64,286 30	9,057 53	239 70	7,223 24	294,478 94
June	46,791 50	14,580 00	16,062 91	113,439 04	17,283 33	6,402 99	47,896 24	3,783 52	220 98	1,629 07	268,089 58
July	42,560 00	14,230 00	18,643 26	418,697 57	35,697 51	4,429 82	66,117 46	6,749 89	79 60	1,066 60	608,271 71
August	40,030 00	13,770 00	18,168 06	81,485 38	37,328 46	5,842 80	62,348 12	6,872 33	96 00	1,690 08	267,631 23
September	32,830 62	9,960 00	14,019 64	208,681 77	12,711 03	6,004 29	69,496 75	2,341 12	96 50	1,321 19	357,462 91
October	30,286 00	9,510 00	15,316 69	225,640 92	42,196 97	7,848 78	85,757 00	5,363 08	144 60	3,447 47	425,511 51
November	26,560 00	7,890 00	15,680 86	214,964 30	23,801 87	7,419 69	56,317 32	6,340 00	192 40	1,101 22	360,267 66
December	21,000 00	5,880 00	14,927 26	178,527 90	18,882 50	3,557 87	38,719 19	3,401 50	957 65	1,332 16	287,186 03
1912											
January	16,925 00	4,630 00	12,834 10	122,586 80	35,817 85	5,345 66	80,311 18	1,980 73	144 59	1,595 53	282,171 44
February	19,450 00	4,920 00	11,617 05	113,703 38	29,910 95	7,015 92	50,269 86	1,684 82	98 62	1,347 46	240,017 46
March	26,150 00	5,970 00	12,536 66	124,276 96	26,129 21	5,860 97	61,020 02	1,938 09	28,233 16	2,421 52	294,536 59
	391,703 12	116,000 00	184,825 92	1,967,182 85	400,668 61	69,519 41	729,240 42	56,497 74	30,623 15	26,998 52	3,973,259 74

DEPARTMENT OF THE INTERIOR,
ACCOUNTS BRANCH,
OTTAWA, May 31, 1912.

CHAS. H. BEDDOE,
Superintending Accountant.

DOMINION LANDS REVENUE.

K.—Statement of Gross Receipts (Cash and Scrip) on Account of Dominion Lands Revenue for the Fiscal Year ended March 31, 1912, compared with the previous Fiscal Year.

Particulars.	1911–12.	1910–11.	Increase.	Decrease.	Net increase.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Dominion Lands Agencies	2,635,980 27	1,885,727 39	750,252 88	....	
Crown Timber Agencies	382,396 92	373,887 62	8,509 30	....	
Hay, Mining, Coal, Grazing, &c	668,664 14	757,304 55	....	88,640 41	
Yukon Territory	234,497 66	209,228 56	25,269 10		
Canadian National Parks	56,497 74	69,054 59	....	12,556 85	
Miscellaneous	....	10,870 70	....	10,870 70	
Total	3,978,036 73	3,306,073 41	784,031 28	112,067 96	671,963 32

CHAS. H. BEDDOE,
Superintending Accountant.

Department of the Interior,
Accounts Branch,
Ottawa, May 31, 1912.

L.—STATEMENT of Chinese Immigration Revenue Collected during the Fiscal Year 1911-12.

Trade and Commerce Department, April 1, 1911, to October 1, 1911	$2,078,383
Department of the Interior, October 2, 1911, to March 31, 1912	971,339
	$3,049,722

Port.	Number of Chinese Exempt.	Paying Head Tax.		Registration for Leave.		Other Revenue.	Total Revenue.
		Number of Chinese.	Amount.	Number.	Amount.		
			$		$	$	$
Victoria	189	4,382	2,191,000	2,518	2,518	400	2,193,918
Vancouver	273	1,432	716,000	1,785	1,785	1,550	719,335
Nanaimo	7	1	500	....	....	500	1,000
Montreal	26	223	111,500	9	9	950	112,459
Quebec	....	3	1,500	1	1	....	1,501
Halifax	....	6	3,000	3	3	....	3,003
N. Sydney	....	....	....	4	4	....	4
St. John	....	10	5,000	2	2	....	5,002
Toronto	3	18	9,000	....	....	500	9,500
Ottawa	....	8	4,000	....	....	....	4,000
All Ports	498	6,083	3,041,500	4,322	4,322	3,900	3,049,722

CHAS. H. BEDDOE,
Superintending Accountant.

DEPARTMENT OF THE INTERIOR,
ACCOUNTS BRANCH,
OTTAWA, May 31, 1912.

No. 28.

REPORT OF THE SCHOOL LANDS BRANCH.

Department of the Interior,
School Lands Branch,
Ottawa, June 22, 1912.

W. W. Cory, Esq., C.M.G.,
Department of the Interior,
Ottawa.

Sir,—I have the honour to submit the following report on the business of the School Lands Branch of the department for the fiscal year ending March 31, 1912.

SALES.

It was the intention to have held a series of auction sales of school lands at a number of points in the province of Saskatchewan during the autumn of 1911, but, owing to the lateness of the harvest, and the partial failure of the crop, it was found advisable in the interests of the school lands fund to postpone the sales, and consequently no general auction sales were held during the past fiscal year.

A few parcels were, however, disposed of at public auction as follows:—

MANITOBA.

Parts of legal subdivisions 11, 14 and 15 of section 11, township 21, range 2, east of the principal meridian, comprising 103·60 acres, were sold for $3,305.76, or an average price of $31.88 per acre.

SASKATCHEWAN.

Section 29, township 17, range 23; S.W. ¼ section 29, township 19, range 22; part S.E. ¼ section 11, township 22, range 18, all W. 2nd M., comprising 793·24 acres in all, were sold for $33,507.82, an average price of $42.24 per acre.

The southwest quarter of section 11, township 45, range 19 west of the 2nd meridian, comprising 158 acres, was also sold for $7,058, an average price of $44.57 per acre.

In addition to the foregoing sales at public auction a number of small parcels of land were sold to railway companies, under the provisions of the Railway Act, for right-of-way and other purposes of the railway, as follows:—

Manitoba..	99·37	acres for	$ 903 00
Saskatchewan..	510·03	"	7,303 77
Alberta..	335·07	"	5,022 24

Sales were also made to boards of school trustees, under the provisions of the Dominion Lands Act, of small parcels, not exceeding four acres, for school sites, namely:—

Saskatchewan..	66	acres for	$630 00
Alberta..	38	"	380 00

The total area sold in each province during the fiscal year was:—

Manitoba: 203·05 acres for $4,208.76, or an average price of $20.73 per acre.
Saskatchewan: 1,517·27 acres for $48,429.59, or an average price of $31.92 per acre.
Alberta: 373·07 acres for $5,402.54, or an average price of $14.48 per acre.

The total area sold in each province from the beginning to March 31, 1912, and the amount represented by such sales, after making the necessary deductions for cancellations and for changes in area, are as follows:—

MANITOBA.

Area sold to March 31, 1912 ... acres.	577,255·74
Amount represented by such sales	$5,528,932 19
Town lots, of which no area is given	5,806 00
Total amount represented by sales	5,534,738 19
Average price per acre	9 60
Total amount collected	3,096,104 25

Of the above sum $30,000 was advanced to the province, leaving the amount of principal collected and standing to the credit of the fund $3,066,104.25.

SASKATCHEWAN.

Area sold to March 31, 1912 ... acres.	505,861·33
Amount represented by such sales	$6,859,233 48
Sales of town lots of which no area is given	771 00
Total amount represented by sales	6,860,004 48
Average price per acre	13 56
Amount collected, and standing to the credit of the fund.	2,033,865 71

ALBERTA.

Area sold to March 31, 1912 ... acres.	557,646·27
Amount of principal represented by such sales	$6,429,481 89
Average price per acre	11 53
Amount of principal collected and standing to the credit of the fund on March 31, 1912	1,770,403 63

GRAZING.

A number of grazing permits were issued during the fiscal year for school lands in each province, as follows:—

Manitoba	50
Saskatchewan	810
Alberta	472
Total	1,332

There are still 244 grazing leases in force in the three provinces, but these will shortly expire, and, if renewed, will be in the form of grazing permits.

The revenue from leases and grazing permits during the fiscal year was:—

Manitoba	$ 1,965 37
Saskatchewan	13,568 43
Alberta	$10,434 46
Total	$25,968 26

HAY.

The revenue from hay leases and permits in each province, was as follows:—

Manitoba	$ 942 90
Saskatchewan	4,774 04
Alberta	1,999 61
Total	$7,716 55

COAL

The revenue from this source from leases and permits for domestic purposes, was:—

Saskatchewan	$ 1,177 66
Alberta	18,444 34
Total	$19,622 00

The number of coal leases still in force is 89.

Attached hereto are three statements, lettered respectively, 'A.,' 'B.' and 'C.,' showing, duly classified, the revenue from all sources during the fiscal year, the net total for each province being as follows:—

Manitoba	$ 377,710 14
Saskatchewan	539,133 98
Alberta	673,029 30
Total	$1,589,873 42

Of the above sum, $60,795.66 was collected through the agencies, and the balance of $1,529,077.86 at head office.

Under the provisions of the orders in council in that behalf, the net revenue collected from the school lands in each province during the fiscal year, after deducting the principal moneys and the cost of management, was paid over to the government of each province.

The amount to be paid over was arrived at as follows:—

MANITOBA.

Total net revenue	$ 377,710 14
Less principal moneys	268,770 24
Revenue other than principal moneys	$ 108,939 90
Less cost of management	9,340 84
Amount to be paid to province	$ 99,599 06

SASKATCHEWAN.

Total net revenue	$ 539,133 98
Less principal moneys	344,932 94
Revenue other than principal moneys	$ 194,201 04
Less cost of management	9,521 11
Amount to be paid to the province	$ 184,679 93

ALBERTA.

Total net revenue for fiscal year..	$ 673,029 30
Less principal moneys..	478,388 71
Revenue other than principal moneys..	$ 194,640 59
Less cost of management..	9,390 83
Amount to be paid to province..	$ 185,249 76

In addition to the foregoing amounts, the following sums were paid to the Provincial Governments of Manitoba, Saskatchewan and Alberta as the interest accrued on the school lands funds, namely:—

Manitoba..	$ 88,094 57
Saskatchewan..	58,873 11
Alberta..	50,797 04

Adding the above amounts to the sums paid over to the province for revenue collected, the total payments to the provinces for the fiscal year are as follows:—

Manitoba..	$187,693 63
Saskatchewan..	243,553 04
Alberta..	236,046 80

Statement 'D.,' hereto attached, shows the revenue collected through the agencies during the fiscal year.

Statements 'E.,' 'F.' and 'G.,' hereto attached, show the balance standing to the credit of each of the school lands funds on April 1, 1912:—

Manitoba..	$3,066,104 25
Saskatchewan..	2,033,865 71
Alberta..	1,770,403 63
	$6,870,373 59

The total expenditure in connection with the school lands during the fiscal year was $28,252.78, and as the total revenue was $1,589,873.42, the cost of management was less than 2 per cent of the revenue collected.

The following is a statement of the work done during the fiscal year, which, however, gives only an approximate idea of the volume of business.

Letters sent out..	20,470
Letters received..	13,990
Statements of accounts rendered..	15,000
Receipts issued..	4,764
Grazing permits issued..	1,332
Cultivation permits issued..	19
Coal leases issued..	21
Assignments registered..	454
Requisitions for patent..	466

Respectfully submitted,

FRANK S. CHECKLEY,
Chief of Branch.

STATEMENT A.—MANITOBA.

Statement of Revenue collected from School Lands for the Fiscal Year from April 1, 1911, to March 31, 1912, both dates inclusive.

Month.	Sales.		Total.	Cultivation.	Grazing.	Timber.	Hay.	Registration Fees.	Total.
	Principal.	Interest.							
1911.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
April	7,758 91	1,966 27	9,725 18	50 00	125 72				9,900 90
May	14,781 94	5,681 52	20,463 46		193 90				20,657 36
June	27,227 20	14,285 27	41,512 47		35 10				41,547 57
July	16,280 56	8,474 70	24,755 26		19 20				24,774 46
August	7,847 86	2,611 49	10,459 35		45 80	7 50			10,512 65
September	5,203 05	1,450 74	6,653 79		27 31				6,681 10
October	12,954 89	3,967 95	16,922 84	3 00	3 86				16,929 70
November	47,961 71	21,392 13	69,353 84	27 00	254 40				69,635 24
December	41,776 55	14,516 29	56,292 84	17 50	89 60	8 00			56,407 94
1912.									
January	19,028 06	8,736 81	27,764 87	30 00	215 76				28,010 63
February	24,028 19	7,284 40	31,313 59	5 50	218 52				31,536 61
March	33,633 42	9,455 63	43,089 05	63 50	191 48	82 50			43,426 53
	258,482 34	99,823 20	358,305 54	196 50	1,420 65	98 00			360,020 69
Agencies	10,685 56	3,195 31	13,880 87		602 32	2,930 96	1,234 30		18,648 45
	269,167 90	103,018 51	372,186 41	196 50	2,022 97	3,028 96	1,234 30		378,669 14
Registration Fees								177 85	177 85
	269,167 90	103,018 51	372,186 41	196 50	2,022 97	3,028 96	1,234 30	177 85	378,846 99
Fees transferred to Dominion Lands						29 50	275 00		304 50
	269,167 90	103,018 51	372,186 41	196 50	2,022 97	2,999 46	959 30	177 85	378,542 49
Refunds	397 66	254 77	652 43	40 00	57 60	65 92	16 40		832 35
Total	268,770 24	102,763 74	371,533 98	156 50	1,965 37	2,933 54	942 90	177 85	377,710 14

School Lands Branch,
Department of the Interior,
Ottawa, May 20, 1912.

FRANK S. CHECKLEY,
Chief of Branch.

STATEMENT B.—SASKATCHEWAN.

Statement of Revenue collected from School Lands for the Fiscal Year from April 1, 1911, to March 31, 1912, both dates inclusive.

Month.	Sales.		Total.	Cultivation.	Grazing.	Timber.	Hay.	Coal.	Registration Fees.	Total.
	Principal.	Interest.								
1911.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
April	8,385 72	2,605 78	10,991 50	....	845 40	....	....	....	....	11,836 90
May	30,592 76	6,020 84	36,613 60	12 50	730 34	....	50	144 59	....	37,501 53
June	51,298 62	35,449 63	86,748 25	15 00	530 82	5 00	....	....	....	87,299 07
July	74,765 29	54,431 77	129,197 06	15 00	696 88	....	3 00	141 45	....	130,053 39
August	6,062 01	3,617 77	9,679 78	11 48	209 25	....	....	....	....	9,900 51
September	7,510 99	1,148 54	8,659 53	15 50	214 41	....	....	....	....	8,889 44
October	24,407 75	6,306 40	30,714 15	9 00	191 26	....	....	....	....	30,914 41
November	39,640 46	21,458 50	61,099 02	....	215 93	....	....	183 92	....	61,498 87
December	38,765 23	12,994 93	51,760 16	11 50	323 05	....	....	5 00	....	52,099 71
1912.										
January	26,683 27	10,577 85	37,261 12	....	2,074 73	....	....	....	....	39,335 85
February	14,248 58	4,408 89	18,657 47	....	2,574 45	....	1 50	....	....	21,233 42
March	21,122 81	9,488 93	30,611 74	15 00	1,895 66	....	....	....	....	32,522 40
	343,483 49	168,509 89	511,993 38	104 98	10,502 18	5 00	5 00	474 96	....	523,085 50
Agencies	2,932 67	4,488 63	7,421 30	3 00	3,363 48	1,732 00	5,894 54	707 70	....	19,122 02
	346,416 16	172,998 52	519,414 68	107 98	13,865 66	1,737 00	5,899 54	1,182 66	....	542,207 52
Registration Fees	....	....	....	....	....	....	....	....	408 65	408 65
	346,416 16	172,998 52	519,414 68	107 98	13,865 66	1,737 00	5,899 54	1,182 66	408 65	542,616 17
Fees transferred to Dom. Lands	....	....	....	....	....	10 75	1,105 00	....	....	1,115 75
	346,416 16	172,998 52	519,414 68	107 98	13,865 66	1,726 25	4,794 54	1,182 66	408 65	541,500 42
Refunds	1,483 22	560 49	2,043 71	....	297 23	....	20 50	5 00	....	2,366 44
Total	344,932 94	172,438 03	517,370 97	107 98	13,568 43	1,726 25	4,774 04	1,177 66	408 65	539,133 98

School Lands Branch,
Department of the Interior,
Ottawa, May 20, 1912.

FRANK S. CHECKLEY,
Chief of Branch.

STATEMENT C.—ALBERTA.

STATEMENT of Revenue collected from School Lands for the Fiscal Year from April 1, 1911, to March 31, 1912, both dates inclusive.

Month.	Sales.		Total.	Grazing.	Timber.	Hay.	Coal.	Petroleum.	Registration Fees.	Total.
	Principal.	Interest.								
1911.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
April	1,253 69	301 41	1,555 10	514 60			288 00			2,357 70
May	212,496 77	31,334 50	243,831 27	260 79		2 00	1,059 25			245,153 31
June	10,091 33	7,208 03	17,299 36	275 20			173 00			17,747 56
July	47,683 72	28,599 08	76,282 80	437 95		3 20	116 70			76,840 65
August	31,555 09	13,552 27	45,107 36	261 61		40 00	856 00			46,264 97
September	3,912 09	2,088 97	6,001 06	156 52			336 00			6,493 58
October	32,478 78	13,549 00	46,027 78	247 13			1,696 00			47,970 91
November	78,754 62	33,507 22	112,261 84	193 81			2,139 10			114,594 75
December	27,786 48	12,780 69	40,567 17	298 80		20	2,004 77			42,870 94
1912.										
January	10,827 06	4,881 84	15,708 90	1,206 79	71		404 80			17,321 20
February	8,953 87	4,866 20	13,820 07	2,165 86			1,613 63			17,599 56
March	8,484 00	5,108 70	13,592 70	1,946 35	267 39		485 99			16,292 43
	474,277 50	157,777 91	632,055 41	7,965 41	268 10	45 40	11,173 24			651,507 56
Agencies	4,148 87	4,002 82	8,151 69	2,831 37	1,668 12	2,484 21	7,884 70	5 00		23,025 09
	478,426 37	161,780 73	640,207 10	10,796 78	1,936 22	2,529 61	19,057 94	5 00		674,532 65
Registration Fees									439 90	439 90
	478,426 37	161,780 73	640,207 10	10,796 78	1,936 22	2,529 61	19,057 94	5 00	439 90	674,972 55
Fees transferred to Dom. Lands					9 50	472 00				481 50
	478,426 37	161,780 73	640,207 10	10,796 78	1,926 72	2,057 61	19,057 94	5 00	439 90	674,491 05
Refunds	37 66		37 66	362 32	50 17	58 00	613 60	5 00		1,126 75
Total	478,388 71	161,780 73	640,169 44	10,434 46	1,876 55	1,999 61	18,444 34		439 90	673,364 30
Refund of amount received during Fiscal Year 1910-1911 on account of Application for Petroleum Leases										335 00
Grand Total										$673,029 30

SCHOOL LANDS BRANCH,
DEPARTMENT OF THE INTERIOR,
OTTAWA, May 20, 1912.

FRANK S. CHECKLEY,
Chief of Branch.

D.—Statement of Revenue from School Lands collected by the different Agencies, during the Fiscal Year ending March 31, 1912.

Agencies.	Sales.		Total.	Cultivation.	Grazing.	Timber.	Hay.	Coal.	Petroleum.	Total.
	Principal.	Interest.								
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Winnipeg	6,091 77	1,659 86	7,751 63		57 60	2,771 21	805 40			11,385 84
Brandon	3,297 93	990 79	4,288 72		512 15		188 30			4,989 17
Dauphin	1,295 86	544 66	1,840 52		32 57	159 75	240 60			2,273 44
Estevan					51 44		527 55	682 70		1,261 69
Regina	2,052 92	524 47	2,577 39	3 00	513 36	9 25	948 75			4,051 75
Yorkton	879 75	1,787 85	2,667 60		109 35		363 20			3,140 15
Prince Albert					193 73	1,710 00	408 55			2,312 28
Battleford					400 60	12 50	597 05			1,010 15
Humboldt					604 08	512 65				1,116 73
Moosejaw					380 67		1,098 70	20 00		1,499 37
Saskatoon					160 00	25	789 95			950 20
Swift Current					706 39		591 64	5 00		1,303 03
Medicine Hat	547 00	5,410 82	5,957 82		791 69		125 55	75 00		6,950 06
Lethbridge		147 60	147 60		238 38		71 30	3,251 50		3,708 78
Calgary	3,249 28	433 13	3,682 41		1,299 68	5 25	576 80	1,804 80	5 00	7,373 94
Red Deer					230 32	91 50	826 10	1,188 40		2,336 32
Edmonton	352 59	187 58	540 17		423 41	1,571 12	920 16	1,565 00		5,019 86
Peace River						25				25
Grande Prairie					91 75	20 80				112 55
Total	17,767 10	11,686 76	29,453 86	3 00	6,797 17	6,864 53	9,079 60	8,592 40	5 00	60,795 56

School Lands Branch,
Department of the Interior,
Ottawa, May 20, 1912.

FRANK S. CHECKLEY,
Chief of Branch.

STATEMENT E.—MANITOBA SCHOOL LANDS.

STATEMENT of Revenue and Expenditure on account of Manitoba School Lands for the Fiscal Year ended March 31, 1912.

Particulars.	Period.	Dr.	Cr.
		$ cts.	$ cts.
By balance on April 1, 1911			2,797,334 01
" sales	12 months ended March 31, 1912		371,533 98
" cultivation permits	" " "		156 50
" timber dues, hay permits, grazing rentals	" " "		5,841 81
" registration fees	" " "		177 85
" interest on fund	" " "		88,094 57
To cost of management at Ottawa	12 months ended March 31, 1912	5,540 30	
" salaries, printing, advertising and general expenses	" " "	3,800 54	
" revenue and interest paid to Manitoba Government	" " "	99,599 06	
" interest on fund paid to Manitoba Government	" " "	88,094 57	
" balance on March 31, 1912		3,066,104 25	
		3,263,138 72	3,263,138 72

FRANK S. CHECKLEY,
Chief of Branch.

DEPARTMENT OF THE INTERIOR,
SCHOOL LANDS BRANCH,
OTTAWA, June 3, 1912.

STATEMENT F.—SASKATCHEWAN SCHOOL LANDS.

STATEMENT of Revenue and Expenditure on account of Saskatchewan School Lands for the Fiscal Year ended March 31, 1912.

Particulars.	Period.	Dr.	Cr.
		$ cts.	$ cts.
By balance on April 1, 1911	12 months ended March 31, 1912		1,688,932 77
" sales	" " "		517,370 97
" cultivation permits	" " "		107 98
" timber dues, hay permits, grazing and coal rentals	" " "		21,246 38
" registration fees	" " "		408 65
" interest on fund	" " "		58,873 11
To cost of management at Ottawa	12 months ended March 31, 1912	5,540 30	
" salaries, printing, advertising and general expenses	" " "	3,980 81	
" revenue and interest paid to Saskatchewan Government	" " "	184,679 93	
" interest on fund paid to Saskatchewan Government	" "	58,873 11	
" balance on March 31, 1912		2,033,865 71	
		2,286,939 86	2,286,939 86

FRANK S. CHECKLEY,
Chief of Branch.

DEPARTMENT OF THE INTERIOR,
SCHOOL LANDS BRANCH,
OTTAWA, June 3, 1912.

STATEMENT G.—ALBERTA SCHOOL LANDS.

STATEMENT of Revenue and Expenditure on account of Alberta School Lands for the Fiscal Year ended March 31, 1912.

Particulars.	Period.	Dr.	Cr.
		$ cts.	$ cts.
By balance on April 1, 1911			1,292,014 92
" sales	12 months ended March 31, 1912.		640,169 44
" timber dues, hay permits, grazing and coal rentals and petroleum	" " "		32,419 96
" registration fees	" " "		439 90
" interest on fund	" " "		50,797 04
To cost of management at Ottawa.	12 months ended March 31, 1912.	5,540 30	
" salaries, printing, advertising and general expenses	" " "	3,850 53	
" revenue and interest paid to Alberta Government	" " "	185,249 76	
" interest on fund paid to Alberta Government	" " "	50,797 04	
" balance on March 31, 1912	" " "	1,770,403 63	
		2,015,841 26	2,015,841 26

FRANK S. CHECKLEY,
Chief of Branch.

DEPARTMENT OF THE INTERIOR,
SCHOOL LANDS BRANCH,
OTTAWA, June 3, 1912.

No. 29.

REPORT OF THE LAND PATENTS BRANCH.

Department of the Interior,
Land Patents Branch,
Ottawa, June 27, 1912.

W. W. Cory, Esq., C.M.G.,
Deputy Minister of the Interior,
Ottawa.

Sir,—I have the honour to submit my report on the work performed in the Land Patents Branch of the Department of the Interior during the twelve months which ended on March 31, 1912, and the several statements in relation thereto marked A. to Y. inclusive.

LETTERS PATENT.

The number of letters patent issued during the period mentioned was 19,354, covering an area of 3,155,388 acres, which may be classified as follows:—

	Patents.	Acres.
Province of Manitoba	973	143,849
" Saskatchewan	11,124	1,786,466
" Alberta	7,031	1,189,463
" British Columbia	186	33,202
Yukon Territory	34	2,368
Northwest Territories	6	40
Total	19,354	3,155,388

Seventeen thousand and seventeen of these patents were for land the title to which had been earned under homestead entry, covering an area of 2,694,715 acres, and the remaining 2,337 patents for 460,673 acres, were for grants made to the Hudson's Bay Company, railway companies, sales, school land sales, half-breed scrip locations and other grants. There was a decrease of 2,400 patents and of 554,900 acres, as compared with the preceding year.

There are recorded in the Land Patents Branch 239,458 letters patent, aggregating an area of 65,752,724 acres, which have been issued since 1873 to March 31, 1912. A statement recently compiled showing the number of patents issued each year during that period with the acreage patented in each of such years, is appended hereto.

To the area of patented lands above referred to. namely, 65,752,724 acres, should be added an approximate area of 5,529,600 acres granted, up to March 31, 1912, to the Hudson's Bay Company by notifications issued under the provisions of the statute in that behalf (in addition to this 582,056 acres have been conveyed to the Hudson's Bay Company by letters patent) and 2,012,416 acres vested in the province of Manitoba as swamp lands by orders in council passed from time to time since 1885, making a total area of 73,294,740 acres of Dominion lands alienated, being equal to 3,181 full townships, or to 114,516 square miles.

The number of acres surveyed since the beginning of surveys to the end of March of this year is 156,092,544 acres, which is equal to 6,775 full townships, or to 243,900 square miles.

LAND DISPOSED OF.

Fifty-two thousand six hundred and eighty entries recorded in this branch were granted during the year, aggregating an approximate area of 8,714,040 acres, made up as follows:—

			Acres.
Homestead entries—			
Manitoba	3,158		
Saskatchewan	20,484		
Alberta	15,184		
British Columbia	325		
		39,151	6,264,160
Pre-emption entries—			
Saskatchewan	6,929		
Alberta	3,682		
		10,211	1,633,760
Purchased homesteads—			
Saskatchewan	1,043		
Alberta	365		
		1,408	225,280
South African volunteer homesteads—			
Manitoba	6		
Saskatchewan	920		
Alberta	857		
		1,783	570,560
Half-breed scrip locations—			
Manitoba	6		
Saskatchewan	41		
Alberta	80		
		127	20,280
Total		52,680	8,714,040

There was a decrease in the number of homestead entries granted as compared with the previous year of 5,328 entries.

By land agencies the 39,151 homestead entries above referred to were made as follows:—

MANITOBA.

Brandon	51
Dauphin	1,012
Winnipeg	2,095
	3,158

SASKATCHEWAN.

Battleford	2,484
Estevan	937
Humboldt	1,721
Medicine Hat (part)	1,137
Moosejaw	4,083
Prince Albert	2,096
Regina	341
Saskatoon	2,967
Swift Current	3,453
Yorkton	1,265
	20,484

ALBERTA.

Calgary	3,837
Edmonton	1,398
Grand Prairie	492
Lethbridge	567
Medicine Hat (part)	1,707
Peace River	452
Red Deer	1,731
	15,184

BRITISH COLUMBIA.

Kamloops	287
New Westminster	38
	325

The 39,151 entrants for homesteads represented 91,372 souls, as compiled from the information obtained from each entrant. Of these entries 9,531 were made by residents of the several provinces of the Dominion, 401 by Canadians who had returned from the United States and 2,132 by persons who had already obtained homestead entries, but which had either been cancelled by default or at the request of the entrants in order, in most cases, to enter for other land; 7,256 were made by persons from the British Isles; 10,577 by Americans; 3,121 by Austro-Hungarians; 1,781 by Russians; 1,160 by Norwegians; 964 by Swedes; 790 by Germans; 437 by Frenchmen; 159 by Belgians and the remaining 842 homestead entries were made by citizens of various other countries.

CANCELLED ENTRIES.

There were cancelled during the same period, 24,909 entries comprising 18,608 homestead entries, 6,103 pre-emption entries, 175 purchased homestead entries and 23 sales.

SALES.

One thousand and seventy sales were made during the fiscal year for 52,517 acres of land, which included 244 sales of townsite lots in the railway belt in the province of British Columbia, leaving 826 ordinary sales of Dominion lands with an average acreage for each sale of about 63½ acres.

HALF-BREED SCRIP.

In connection with the extinguishment of the Indian title to the territory covered by the adhesion to Indian Treaty No. 5, comprising Churchill, York Factory and other places, which adhesion treaty was concluded in 1908, 1909 and 1910, 86 claims, in addition to those which had been previously allowed, were approved under the authority of an order of the governor in council, bearing date May 24, 1911, a list of which claims was published at the time in the *Canada Gazette*. The scrip issued in satisfaction thereof was delivered last summer to the claimants personally by an officer of the government.

This last issue of scrip practically closes the issue of scrip to the half-breeds, whose claims arising out of the extinguishment of the Indian title have been, in my opinion, most liberally treated by royal commissions and the department at various times since 1876.

SOUTH AFRICAN VOLUNTEER CERTIFICATES.

Under the Volunteer Bounty Act, 1908, and amendments thereto, up to date 7,281 certificates have been issued entitling the volunteers, or their duly appointed substitutes, to select and enter for two adjoining quarter sections, aggregating 320 acres of land, of the class open to homestead entry, in the provinces of Manitoba, Saskatchewan and Alberta, subject to the performance of the settlement duties prescribed by the Dominion Lands Act with regard to ordinary homestead grants.

Of these certificates, 649 were located by the volunteers themselves, and 6,379 by their substitutes. Of those originally located by the volunteers, 360 were subsequently transferred to substitutes. Of the locations made by the volunteers or their substitutes, 101 have been cancelled.

MILITARY BOUNTY AND NORTHWEST MOUNTED POLICE LAND WARRANTS.

A public notice, bearing date April 7, 1910, was issued by the department, which was published at the time in the *Canada Gazette* and several newspapers, containing a list of the names of the persons to whom 147 of the warrants above referred to, were issued many years ago for services rendered in connection with the Red River expeditions of 1870, 1871, 1872 and 1873, or for service in the Northwest Mounted Police, but which warrants were still held in the department owing to the fact that they had not been theretofore applied for by the grantees. It was stated in such public notice that the warrants in question would be delivered to the grantees thereof, or in the case of their death, to their personal representatives, upon satisfactory evidence being furnished the department.

Since the issue of this notice 26 of these warrants have been delivered, leaving still, in the custody of the department, at the present time, 121 of such warrants, which entitle the grantee or his assignee to a free grant, without actual residence or settlement duties, of a quarter section of Dominion lands, containing 160 acres of land of the class open to homesead entry in the provinces of Manitoba, Saskatchewan or Alberta.

A list of these land warrants unclaimed, at this date, is appended hereto.

CLAIMS TO LAND.

Nearly all the claims which have been preferred by persons who were in actual and peaceable possession of land in the Peace River district at the time Indian Treaty No. 8 was concluded in the summer of 1899, to a free grant of the land they so occupied, not exceeding 160 acres, in so far as the lands affected have been surveyed, have been investigated in the Land Patents Branch and reported on and where such claims have been approved of by the Governor in Council patents therefor have been issued.

Squatters' claims and other claims to land and applications to purchase land have been likewise dealt with in this branch and reported on during the year.

RAILWAY RIGHTS OF WAY.

The work in connection with the issue of letters patent to the several railway companies for their respective rights of way and station grounds over available Dominion lands, or lands transferred to them by the entrants therefor, which is being attended to in the technical office of this branch, is progressing satisfactorily.

ACCOUNTS AND REVENUE.

There are at present kept in the branch about 30,000 accounts in connection with purchased homesteads, pre-emption sales and ordinary sales and some 12,000 seed grain and provision accounts.

During the last fiscal year nearly $2,000,000, including about $429,000 for interest on deferred payments, was received on account of the sales above mentioned and $119,634.13, including about $16,000 on account of interest, was received in payment for seed grain and provision liens.

All the items which made up this large sum of money after having been carefully verified, were posted in their respective accounts.

In connection with these accounts some 50,000 notices with statements of accounts were sent during the year and 2,894 receipts were issued for payments made at the department amounting to $443,333.68.

REFUNDS.

In connection with sales and moneys collected for the value of improvements on cancelled homesteads there were 2.393 refunds made amounting to $155,231.07, and in connection with seed grain accounts 180 refunds, amounting to $3,012.43. The latter refunds were mostly for duplicate payments or for payments which had been sent to the department instead of to the provincial authorities, by whom, in these cases, the seed grain had been advanced to the settlers and the refunds made on account of sales were for overpayments or payments made in advance on account of purchased homesteads or pre-emptions, which is contrary to our practice.

RECORDS.

An inventory was recently made of all records, books and plans of this branch, which shows that there are 1,336 volumes of large sized books, such as township and other large registers, patent indexes, libers of patents issued, military bounty grants and half-breed records, registers of assignments, &c., and 8,290 plans of townships upon which a record is kept of all lands patented, of townsites, settlements, rights of way and station grounds of railways, and of roads and trails, &c.

There are recorded in the branch 239.458 patents, aggregating an area of 65,752,724 acres, as already stated, and some 18,000 assignments.

These books and plans constitute a complete record of all the land transactions of the department since its inception in 1873, with the exception of the record containing the copies of letters patents which were issued between 1873 and July, 1883, which are recorded in the Department of the Secretary of State.

ACCOMMODATION.

Our present quarters, for the past few years, both for the proper carrying on of the work of the branch, the accommodation of the staff and the keeping of the records, which latter are increasing from year to year, have been most inadequate.

I, therefore, take this opportunity of calling attention to the urgent necessity of providing suitable quarters for the accommodation of the staff and records of the Land Patents branch.

I am pleased to be able to state that the work of the branch at the present time is in a satisfactory condition, the issue of letters patent, the correspondence and the posting of all entries being up to date.

In conclusion I desire to express my appreciation of the services rendered by the members of the branch, most of whom have been labouring under great difficulty and personal discomfort in the performance of their official duties, owing to the lack of accommodation above referred to.

The following is a summary showing, approximately, the work performed in the Land Patents Branch, during the fiscal year which ended on March 31, 1912:—

Files dealt with..	195,696
Letters sent, written in the branch	24,000
" " assistant secretary's office..	15,000
Notices sent to patentees..	18,000
Notices sent to purchasers, with statements of accounts..	50,000
Patents issued and forwarded..	19,354
Land entries checked and posted..	52,680
Entries cancelled and recorded..	24,909
Receipts issued..	2,894
Requisitions for refunds prepared..	2,573
Payments amounting to about $2,000,000 checked and posted	
Assignments registered..	373
Instruments appointing substitutes under the Volunteer Bounty Act, 1908, registered..	1,392
Half-breed claims dealt with and requisitions for scrip issued..	86
Applications to purchase land dealt with..	1,000
Seed grain certificates issued..	1,432
Seed grain discharges issued..	1,727
Certified copies of patents prepared..	182
Land agents' cash statements, stubs of receipts, &c., checked and verified for auditor general's office.. ..	

A great number of plans and sketches were prepared, as well as special reports and memoranda to council, &c., of which no record was kept.

I have the honour to be, sir,

Your obedient servant,

N. O. COTE,

Chief of Branch and Registrar
of Dominion Lands Patents.

A.—STATEMENT of Letters Patent covering Dominion Lands situate in Manitoba, Saskatchewan, Alberta, Northwest Territories, British Columbia and the Yukon Territory, issued from the Department of the Interior during the Fiscal Year ending March 31, 1912, as compared with the Fiscal Year ending March 31, 1911, and recorded in the Land Patents Branch.

Number.	Nature of Grant.	From April 1, 1911, to March 31, 1912.		From April 1, 1910, to March 31, 1911.	
		Patents.	Acres.	Patents.	Acres.
1	Alberta Railway and Irrigation Co's sales	154	82,574	98	66,933
2	Assignment of mortgages	5	....	....	
3	British Columbia homesteads	106	15,060	84	12,431
4	British Columbia sales	65	17,878	86	6,389
5	Coal lands sales	10	1,496	45	9,779
6	Coal surface sales	2	117	2	50
7	Commutation grants	3	101	1	24
8	Homesteads	16,911	2,679,655	18,961	3,001,930
9	Hudson's Bay Co.	15	118,976	11	71,588
10	Leases	2	76	....	
11	License of occupation	35	164	23	75
12	Manitoba Act grants	6	446	3	71
13	Manitoba University grants	2	320	2	320
14	Military bounty grants	9	1,441	6	951
15	Military homesteads	7	2,197	5	1,496
16	Mining lands sales	9	3,633	16	2,213
17	Mineral rights (20,234 acres)	85	....	173	
18	Northwest half-breed grants	160	23,475	332	59,634
19	Parish sales	8	904	11	1,096
20	Quit claim, special grants (1,915 acres)	12	....	14	
	Railways:—				
21	Calgary and Edmonton Railway Co	39	23,357	19	5,442
22	Canadian Northern Railway Co	25	3,343	181	38,380
23	Canadian Pacific Railway grants	124	7,598	179	27,649
24	Canadian Pacific Railway grants, Souris Branch	1	42	53	270,826
25	Canadian Pacific Railway roadbed and station grounds	46	156	47	1,586
26	Grand Trunk Pacific Railway	64	1,282	127	2,842
27	Grand Trunk Pacific Branch Lines Co.	38	252	....	
28	Kootenay Central Railway	9	86	....	
29	Manitoba and Northwestern Railway Co	1	12	11	169
30	Manitoba and Southeastern Railway Co	....	....	6	2,252
31	Manitoba Southwestern Colonization Railway Co	5	42	....	
32	Qu'Appelle, Long Lake and Saskatchewan Railroad and Steamboat Co	67	14,802	10	2,034
33	Sales	742	89,850	551	71,099
34	School lands sales	355	54,256	392	42,361
35	Special grants	198	9,429	195	6,710
36	Yukon Territory homesteads	2	213	....	
37	Yukon Territory sales	31	2,155	110	3,958
38	Yukon Territory specials	1	....	....	
	Totals	19,354	3,155,388	21,754	3,710,288

N. O. COTE,

Chief of Branch and Registrar of Dominion Lands Patents.

DEPARTMENT OF THE INTERIOR,
LAND PATENTS BRANCH,
OTTAWA, June 27, 1912.

B.—Statement of Letters Patent covering Dominion Lands situate in the Province of Manitoba, issued from the Department of the Interior during the Fiscal Year ending March 31, 1912, as compared with the Fiscal Year ending March 31, 1911, and recorded in the Lands Patents Branch.

Number.	Nature of Grant.	From April 1, 1911, to March, 31, 1912.		From April 1, 1910, to March 31, 1911.	
		Patents.	Acres.	Patents.	Acres.
1	Assignment of mortgages	5			
2	Commutation grants	3	101	1	24
3	Homesteads	692	106,350	600	92,271
4	Hudson's Bay Co	1	13,216	2	29,694
5	Manitoba Act grants	6	446	3	71
6	Manitoba University grants	2	320	2	320
7	Mining lands sales	2	274	10	1,958
8	Northwest half-breed grants	4	687		
9	Parish sales	6	618	10	1,076
10	Quit claim, special grants (154 acres)	1			
	Railways :—				
11	Canadian Northern Railway Co	1	3	72	12,472
12	Canadian Pacific Railway grants	14	222	2	19
13	Canadian Pacific Railway roadbed and station grounds	46	156	1	7
14	Grand Trunk Pacific Railway			6	133
15	Manitoba and Southeastern Railway Co			1	12
16	Manitoba Southwestern Colonization Ry Co.	5	42		
17	Sales	60	4,194	90	6,078
18	School lands sales	113	16,418	141	19,097
19	Special grants	12	802	10	323
	Totals	973	143,849	951	163,555

N. O. COTE,

Chief of Branch and Registrar of Dominion Lands Patents.

Department of the Interior,
Land Patents Branch,
Ottawa, June 27, 1912.

C.—STATEMENT of Letters Patent covering Dominion Lands situate in the Province of Saskatchewan, issued from the Department of the Interior during the Fiscal Year ending March 31, 1912, as compared with the Fiscal Year ending March 31, 1911, and recorded in the Land Patents Branch.

Number.	Nature of Grant.	From April 1, 1911, to March 31, 1912.		From April 1, 1910, to March 31, 1911.	
		Patents.	Acres.	Patents.	Acres.
1	Homesteads	10,156	1,611,788	11,740	1,860,253
2	Hudson's Bay Co	9	72,990	6	10,196
3	License of occupation	13	....	10	
4	Military bounty grants	4	640	2	320
5	Military homesteads	6	1,877	3	960
6	Mining lands sales	....	....	1	126
7	Mineral rights (1,160 acres)	7	....	16	
8	Northwest half-breed grants	63	9,563	180	33,426
9	Parish sales	1	226	....	
10	Quit claim, special grants (1,761 acres)	11	....	14	
	Railways :—				
11	Canadian Northern Railway Co	23	3,334	109	25,909
12	Canadian Pacific Railway grants	91	4,442	107	3,744
13	Canadian Pacific Railway grants, Souris Branch	1	42	52	270,666
14	Canadian Pacific Railway roadbed and station grounds	....	....	45	1,537
15	Grand Trunk Pacific Railway	10	48	74	1,203
16	Grand Trunk Pacific Branch Lines Co	24	164	....	
17	Manitoba and Northwestern Railway Co	1	12	11	169
18	Manitoba and Southeastern Railway Co	....	....	4	2,080
19	Qu'Appelle, Long Lake and Saskatchewan Railroad and Steamboat Co	67	14,803	10	2,034
20	Sales	385	49,253	274	37,756
21	School lands sales	134	13,410	157	16,293
22	Special grants	118	3,874	78	1,922
	Totals	11,124	1,786,466	12,893	2,268,594

N. O. COTE,

Chief of Branch and Registrar of Dominion Lands Patents.

DEPARTMENT OF THE INTERIOR,
LAND PATENTS BRANCH,
OTTAWA, June 27, 1912.

D.—STATEMENT of Letters Patent covering Dominion Lands situate in the Province of Alberta, issued from the Department of the Interior during the Fiscal Year ending March 31, 1912, as compared with the Fiscal Year ending March 31, 1911, and recorded in the Land Patents Branch.

Number.	Nature of Grant.	From April 1, 1911, to March 31, 1912.		From April 1, 1910, to March 31, 1911.	
		Patents.	Acres.	Patents.	Acres.
1	Alberta Railway and Irrigation Co's sales	154	82,574	98	66,933
2	Coal lands sales	10	1,496	45	9,779
3	Coal surface sales	2	118	2	50
4	Homesteads	6,063	961,517	6,619	1,049,389
5	Hudson's Bay Co.	5	32,770	3	31,698
6	Leases	2	76	....	....
7	License of occupation	22	164	13	75
8	Military bounty grants	5	801	4	631
9	Military homesteads	1	320	2	536
10	Mining lands sales	6	3,207	3	56
11	Mineral rights (19,075 acres)	78	....	157	....
12	Northwest half-breed grants	93	13,225	152	26,208
13	Parish sales	1	60	1	20
	Railways:—				
14	Calgary and Edmonton Railway Co.	39	23,357	19	5,442
15	Canadian Northern Railway Co	1	6	....	....
16	Canadian Pacific Railway Co	17	2,914	69	23,606
17	Canadian Pacific Railway grants, Souris Branch	....	....	1	160
18	Grand Trunk Pacific Railway	51	1,234	47	1,506
19	Grand Trunk Pacific Branch Lines Co.	14	88	....	....
20	Manitoba and Southeastern Railway Co.	....	....	1	160
21	Sales	292	36,362	184	26,298
22	School lands sales	108	24,428	94	6,971
23	Special grants	64	4,746	102	4,342
	Totals	7,031	1,189,463	7,616	1,253,860

N. O. COTE,

Chief of Branch and Registrar of Dominion Lands Patents.

DEPARTMENT OF THE INTERIOR,
LAND PATENTS BRANCH,
OTTAWA, June 27, 1912.

E.—Statement of Letters Patent covering Dominion Lands situate in the Province of British Columbia, issued from the Department of the Interior during the Fiscal Year ending March 31, 1912, as compared with the Fiscal Year ending March 31, 1911, and recorded in the Land Patents Branch.

Number.	Nature of Grant.	From April 1, 1911, to March 31, 1912.		From April 1, 1910, to March 31, 1911.	
		Patents.	Acres.	Patents.	Acres.
1	British Columbia homesteads	106	15,060	84	12,431
2	" sales	65	17,878	86	6,389
3	Mining lands sales	1	152	2	73
	Railways:—				
4	Canadian Pacific Railway grants	2	20	1	280
5	" " roadbed and station grounds	....	....	1	42
6	Kootenay Central Railway	9	86	....	....
7	Special grants	3	6	5	123
	Totals	186	33,202	179	19,338

N. O. COTE,

Chief of Branch and Registrar of Dominion Lands Patents.

Department of the Interior,
Land Patents Branch,
Ottawa, June 27, 1912.

F.—Statement of Letters Patent covering Dominion Lands situate in the Yukon Territory, issued from the Department of the Interior during the Fiscal Year ending March 31, 1912, as compared with the Fiscal Year ending March 31, 1911, and recorded in the Land Patents Branch.

Number.	Nature of Grant.	From April 1, 1911, to March 31, 1912.		From April 1, 1910, to March 31, 1911.	
		Patents.	Acres.	Patents.	Acres.
1	Yukon Territory homesteads	2	213	....	....
2	" sales	31	2,155	110	3,958
3	" specials	1	....	....	....
	Totals	34	2,368	110	3,958

N. O. COTE,

Chief of Branch and Registrar of Dominion Lands Patents.

Department of the Interior,
Land Patents Branch,
Ottawa, June 27, 1912.

G.—STATEMENT of Letters Patent covering Dominion Lands situate in the Northwest Territories, issued from the Department of the Interior during the Fiscal Year ending March 31, 1912, as compared with the Fiscal Year ending March 31, 1911, and recorded in the Land Patents Branch.

Number.	Nature of Grant.	From April 1, 1911, to March 31, 1912.		From April 1, 1910, to March 31, 1911.	
		Patents.	Acres.	Patents.	Acres.
1	Homesteads	....	....	2	16
2	Sales	5	40	3	967
3	Special grants	1	....	....	....
	Totals	6	40	5	983

N. O. COTE,
Chief of Branch and Registrar of Dominion Lands Patents.

DEPARTMENT OF THE INTERIOR,
LAND PATENTS BRANCH,
OTTAWA, June 27, 1912.

H.—STATEMENT showing number of Patents forwarded to the several registrars of the Land Registration districts of the Provinces of Alberta, Saskatchewan, the Northwest Territories and the Yukon Territory, and the number of notifications mailed to patentees during the year ended March 31, 1912.

Registration District.	No. of Patents sent to Registrars.	No. of Notifications mailed to Patentees.
Assiniboia	1,429	1,396
East Saskatchewan	758	743
West Saskatchewan	1,134	1,098
Yorkton	1,177	1,020
Saskatoon	3,557	3,429
Moosejaw	3,078	3,003
Cannington	28	32
North Alberta	4,075	4,018
South Alberta	2,992	2,825
Northwest Territories	6	7
Yukon	35	38
Totals	18,269	17,609

N. O. COTE,
Chief of Branch and Registrar of Dominion Lands Patents.

DEPARTMENT OF THE INTERIOR,
LAND PATENTS BRANCH,
OTTAWA, June 27, 1912.

I.—STATEMENT showing the number of Letters-Patent issued by the Department of the Interior for Dominion Lands since 1873 and the number of acres patented.

Period.		No. of Patents issued.	Acreage.
May, 1873, to 31st December,	1873	420	67,200
1st January, 1874, to 31st December,	1874	577	92,320
1st January, 1875, to 31st October,	1875	464	74,240
Year ended 31st October,	1876	318	50,880
" " " "	1877	2,437	478,840
" " " "	1878	2,357	462,880
" " " "	1879	2,663	426,080
" " " "	1880	1,084	173,440
" " " "	1881	1,885	400,862
" " " "	1882	2,197	506,785
" " " "	1883	4,341	831,341
" " " "	1884	3,896	909,604
" " " "	1885	3,533	898,464
" " " "	1886	4,570	942,055
" " " "	1887	4,599	1,071,364
" " " "	1888	3,275	647,644
" " " "	1889	3,282	661,636
" " " "	1890	3,273	626,019
" " " "	1891	2,449	411,073
" " " "	1892	2,955	549,257
" " " "	1893	2,936	502,601
" " " "	1894	2,553	420,238
November and December,	1894	413	66,102
Year ended 31st December,	1895	2,118	348,964
" " " "	1896	2,665	531,861
" " " "	1897	2,972	499,859
" " " "	1898	3,037	646,671
" " " "	1899	3,904	714,748
1st January, 1900, to 30th June,	1900	1,970	310,501
Year ended 30th June,	1901	6,461	6,846,857
" " " "	1902	8,768	4,711,104
" " " "	1903	7,349	3,266,388
" " " "	1904	6,890	2,982,579
" " " "	1905	8,798	6,197,354
" " " "	1906	12,370	4,181,345
1st July, 1906, to 31st March,	1907	10,596	2,361,330
Year ended 31st March,	1908	18,690	6,138,977
" " " "	1909	22,431	4,215,326
" " " "	1910	22,854	3,662,259
" " " "	1911	21,754	3,710,288
" " " "	1912	19,354	3,155,388
		239,458	65,752,724

N. O. COTE,
Chief of Branch and Registrar of Dominion Lands Patents.

DEPARTMENT OF THE INTERIOR,
LAND PATENTS BRANCH,
OTTAWA, June 27, 1912.

J.—STATEMENT showing the number of Homestead Entries made during the Fiscal Year 1911-12, as compared with Fiscal Year 1910-11.

Agency.	Manitoba.		Saskatchewan.		Alberta.		British Columbia.		Remarks.
	1911-12.	1910-11.	1911-12.	1910-11.	1911-12.	1910-11.	1911-12.	1910-11.	
Battleford	...	...	2,484	2,215	...	...	...	...	
Brandon	51	76	...	...	...	...	...	...	
Calgary	...	...	...	...	3,837	5,450	...	...	
Dauphin	1,012	1,012	...	...	...	...	...	...	
Edmonton	...	...	...	...	6,998	5,112	...	...	
Estevan	...	...	237	1,033	...	...	...	...	
Grande Prairie	...	...	...	...	492	—	...	...	
Humboldt	...	...	1,721	1,738	...	...	...	...	
Kamloops	...	...	...	...	...	...	287	202	
Lethbridge	...	...	...	...	567	933	...	...	
Medicine Hat	...	...	1,137	1,589	1.707	2,146	...	...	
Moosejaw	...	...	4,083	5,285	...	...	...	...	
New Westminster	...	...	...	...	...	...	38	4	
Peace River	...	...	...	...	425	291	...	...	No. of entries for fiscal year 1910-11 = 44,479, 1911-12 = 39,151. Net decrease for fiscal year 1911-12 = 5,328
Prince Albert	...	...	2,096	1,871	...	...	...	...	
Regina	...	...	341	435	...	...	...	...	
Red Deer	...	...	...	...	1,731	2,032	...	...	
Saskatoon	...	...	2,967	4,178	...	...	...	...	
Swift Current	...	...	3,453	5,568	...	...	...	...	
Winnipeg	2,095	1,994	...	...	...	...	...	...	
Yorkton	...	...	1,265	1,315	...	...	...	...	
Total	3,158	3,082	20,484	25,227	15,184	15,964	325	206	

RECAPITULATION.

Month.	Manitoba.		Saskatchewan.		Alberta.		British Columbia.	
	1912.	1911.	1912.	1911.	1912.	1911.	1912.	1911.
1911.								
April	305	324	2,483	4,240	1,785	2,620	37	25
May	333	281	2,328	3,745	1,612	2,328	35	20
June	356	354	2,516	3,440	1,771	1,985	37	23
July	289	307	2,446	2,576	1,593	1,356	33	21
August	235	261	2,194	1,958	1,528	1,256	37	23
September	214	258	1,679	1,530	1,299	1,077	55	16
October	217	364	1,498	1,845	1,167	1,100	27	16
November	231	309	1,422	1,783	976	1,073	21	18
December	240	159	1,032	1,028	814	750	13	15
1912.								
January	196	144	803	642	678	568	8	6
February	218	121	893	830	822	677	17	9
March	264	200	1,190	1,610	1,139	1,172	15	14
Total	3,158	3,082	20,484	25,227	15,184	15,964	325	206

N. O. COTE,
Chief of Branch.

DEPARTMENT OF THE INTERIOR,
LAND PATENTS BRANCH,
OTTAWA, June 27, 1912.

K.—STATEMENT showing number of Homestead Entries granted in the Provinces of Manitoba, Saskatchewan, Alberta and British Columbia for Fiscal Year 1911-12, as compared with Fiscal Year 1910-11.

MANITOBA.

Agencies.	1911-12.	1910-11.	Increase.	Decrease.	Total, 1911-12.	Total, 1910-11.	Increase 1911-12.	Decrease 1910-11.
Winnipeg	2,095	1,994	101					
Dauphin	1,012	1,012						
Brandon	51			25				
	3,158	3,082	101	25	3,158	3,082	76	
SASKATCHEWAN.								
Yorkton	1,265	1,315		50				
Estevan	937	1,033		96				
Regina	341	435		94				
Humboldt	1,721	1,738		17				
Prince Albert	2,096	1,871	225					
Moosejaw	4,083	5,285		1,202				
Medicine Hat	1,137	1,589		452				
Battleford	2,484	2,215	269					
Swift Current	3,453	5,568		2,115				
Saskatoon	2,967	4,178		1,211				
	20,484	25,227	494	5,237	20,484	25,227		4,743
ALBERTA.								
Calgary	3,837	5,450		1,613				
Lethbridge	567	933		366				
Red Deer	1,731	2,032		301				
Edmonton	6,398	5,112	1,286					
Grande Prairie	492		492					
Peace River	452	291	161					
Medicine Hat	1,707	2,146	439					
	15,184	15,964	1,939	2,719	15,184	15,964		780
BRITISH COLUMBIA.								
Kamloops	287	202	85					
New Westminster	38	4	34					
	325	206	119		325	206	119	
Grand total for fiscal year ended 1911-12					39,151			
" " " 1910-11						44,479		
Net decrease for fiscal year 1911-12					5,328	195	5,523	

N. O. COTE,
Chief of Branch.

DEPARTMENT OF THE INTERIOR,
LAND PATENTS BRANCH,
OTTAWA, June 27, 1912.

L.—STATEMENT showing the number of Homestead Entries made during the Fiscal Years ended March 31, 1911-12, and the Nationality of the Homesteaders as reported by the several agencies of the Department in Manitoba, Saskatchewan, Alberta and British Columbia.

Nationalities.	No. of Entries, 1911.	No. of Entries, 1912.
Canadians from Ontario	4,438	3,152
" Quebec	1,101	951
" Nova Scotia	237	182
" New Brunswick	140	118
" Prince Edward Island	68	69
" Manitoba	1.495	998
" Saskatchewan	4,061	3,085
" Alberta	980	863
" British Columbia	136	123
Persons who had previous entry	1,834	2,132
Newfoundlanders	7	6
Canadians returned from the U.S.A.	553	401
Americans	12,485	10,577
English	6,161	5,739
Scotch	1,291	1,041
Irish	492	476
French	376	437
Belgians	133	159
Swiss	74	80
Italians	68	45
Roumanians	175	141
Syrians	64	56
Germans	845	790
Austro-Hungarians	2,804	3,121
Hollanders	201	153
Danes (other than Icelanders)	206	201
Icelanders	96	69
Swedes	937	964
Norwegians	1,092	1,160
Russians	1,858	1,781
Mennonites	6	
Jamaicans		1
Brazilians		1
Chinese	5	8
Japanese	3	6
Persians	9	3
Australians	10	13
New Zealanders	6	12
Greeks	13	3
Hindoos	4	11
Bulgarians		5
Servians	3	4
Turks	7	9
Algerians	1	
Spaniards	2	
Chilians	1	3
Mexicans	1	
Egyptians		1
Madagascans		1
Totals	44,479	39,151

Representing 107,884 souls in 1911.
" 91,372 " 1912.

N. O. COTE,
Chief of Branch.

DEPARTMENT OF THE INTERIOR,
LAND PATENTS BRANCH,
OTTAWA, June 27, 1912.

M.—STATEMENT showing the number of Homestead Entries made during the Fiscal Years ended March 31, 1911-12, by persons coming from the various States and Territories of the American Union.

States.	No. of entries, 1911.	No. of entries, 1912.
Arizona	6	1
Alabama	11	
Alaska	1	2
Arkansas	21	19
California	83	72
Carolina, North	29	10
Carolina, South	12	3
Colorado	16	47
Columbia, District of	....	2
Connecticut	25	13
Dakota, North	4,339	3,987
Dakota, South	782	615
Delaware	1	
Florida	1	4
Georgia	6	9
Idaho	228	138
Illinois	409	169
Indiana	219	245
Indian Territory	....	88
Iowa	598	470
Kansas	200	139
Kentucky	50	49
Louisiana	4	4
Maine	51	20
Maryland	5	6
Massachusetts	93	91
Michigan	650	462
Minnesota	2,213	1,799
Mississippi	10	6
Missouri	147	119
Montana	246	209
Nebraska	200	204
Nevada	3	4
New Hampshire	29	22
New Jersey	16	17
New Mexico	1	7
New York	205	178
Ohio	183	169
Oklahoma	99	97
Oregon	157	105
Pennsylvania	126	136
Rhode Island	19	19
Tennessee	34	25
Texas	32	52
Utah	19	13
Vermont	24	23
Virginia	14	37
Virginia, West	12	6
Washington	683	452
Wisconsin	678	599
Wyoming	30	15
Total	13,038	10,978

N. O. COTE,
Chief of Branch.

DEPARTMENT OF THE INTERIOR,
LAND PATENTS BRANCH,
OTTAWA, June 27, 1912.

N.—STATEMENT showing the number of Homestead Entries made during the Fiscal Year 1911-12, the Nationality of the Homesteaders and the Provinces in which the entries were made.

Nationalities.	Provinces.				Total.
	Manitoba.	Saskatchewan.	Alberta.	British Columbia.	
Canadians from Ontario	173	1,442	1,512	25	3,152
" Quebec	55	335	556	5	951
" Nova Scotia	8	52	116	6	182
" New Brunswick	1	27	85	5	118
" Prince Edward Island	7	23	39	....	69
" Manitoba	414	599	183	2	998
" Saskatchewan	7	2,903	173	2	3,085
" Alberta	3	61	798	1	863
" British Columbia	....	37	61	25	123
Persons who had previous entry	393	729	986	24	2,132
Newfoundlanders	....	1	5	....	6
Canadians returned from the United States	20	248	131	2	401
Americans	214	5,690	4,600	73	10,577
English	332	3,360	1,950	97	5,739
Scotch	79	403	543	16	1,041
Irish	32	145	295	4	476
French	68	232	133	4	437
Belgians	12	107	58	2	159
Swiss	16	29	34	1	80
Italians	6	19	15	5	45
Roumanians	....	128	13	....	141
Syrians	1	49	6	....	56
Germans	60	416	308	6	790
Austro-Hungarians	822	1,272	1,024	3	3,121
Hollanders	35	35	82	1	153
Danes	15	90	96	....	201
Icelanders	44	19	6	....	69
Swedes	74	475	411	4	964
Norwegians	20	699	434	7	1,160
Russians	245	1,016	518	2	1,781
Arabians	....	1	1	....	2
Brazilians	....	1	....	....	1
Chinese	....	3	2	3	8
Japanese	....	4	2	....	6
Persians	....	1	2	....	3
Australians	1	5	7	....	13
New Zealanders	1	7	4	....	12
Hindoos	....	4	7	....	11
Bulgarians	....	3	2	....	5
Greeks	....	2	1	....	3
Turks	....	3	4	....	7
Servians	....	3	1	....	4
Chilians	....	3	....	....	3
Jamaican	....	1	....	....	1
Madagascan	....	1	....	....	1
Egyptian	....	1	....	....	1
Total	3,158	20,484	15,184	325	39,151
Number of souls represented by above entries	....	....	....	....	91,372

N. O. COTE,
Chief of Branch.

DEPARTMENT OF THE INTERIOR,
LAND PATENTS BRANCH,
OTTAWA, June 27, 1912.

O.—Statement showing the number of Homestead Entries made in the Provinces of Manitoba, Saskatchewan, Alberta and British Columbia during the Fiscal Year 1911-12, by persons coming from the United States of America.

States.	Provinces.				Total.
	Man.	Sask.	Alta.	B. C.	
Arizona	...	...	1	...	1
Alabama	...	...	...	...	
Alaska	...	2	...	...	2
Arkansas	...	3	16	...	19
California	1	12	56	3	72
Carolina, North	...	...	10	...	10
Carolina, South	...	...	3	...	3
Colorado	1	16	27	3	47
Columbia, District of	...	...	2	...	2
Connecticut	...	3	10	...	13
Dakota, North	121	2,791	1,073	2	3,987
Dakota, South	8	365	241	1	615
Delaware	...	...	...	...	
Florida	...	...	4	...	4
Georgia	...	3	6	...	9
Idaho	...	35	102	1	138
Illinois	3	145	15	6	169
Indiana	3	55	186	1	245
Indian Territory	...	...	88	...	88
Iowa	3	208	257	2	470
Kansas	...	37	101	1	139
Kentucky	...	13	34	2	49
Louisiana	...	1	3	...	4
Maine	1	13	4	2	20
Maryland	...	...	6	...	6
Massachusetts	1	56	34	...	91
Michigan	9	201	248	4	462
Minnesota	63	1,140	584	12	1,799
Mississippi	...	2	4	...	6
Missouri	7	34	75	3	119
Montana	...	70	137	2	209
Nebraska	2	64	136	2	204
Nevada	...	3	1	...	4
New Hampshire	...	9	13	...	22
New Jersey	...	6	11	...	17
New Mexico	...	5	2	...	7
New York	2	62	109	5	178
Ohio	...	61	102	6	169
Oklahoma	...	21	76	...	97
Oregon	...	20	81	4	105
Pennsylvania	2	34	98	2	136
Rhode Island	1	12	6	...	19
Tennessee	1	6	18	...	25
Texas	...	10	42	...	52
Utah	...	1	12	...	13
Vermont	...	10	13	...	23
Virginia	...	16	20	1	37
Virginia, West	...	...	6	...	6
Washington	1	86	360	5	452
Wisconsin	4	304	288	3	599
Wyoming	...	...	14	1	15
Total	234	5,935	4,735	74	10,978

N. O. COTE,
Chief of Branch.

Department of the Interior,
Land Patents Branch,
Ottawa, June 27, 1912.

P.—STATEMENT showing the number of Homestead Entries reported in each year since 1874.

Departmental year ended:—	No. of Entries.
October 31, 1874	1,376
" 31, 1875	499
" 31, 1876	347
" 31, 1877	845
" 31, 1878	1,788
" 31, 1879	4,068
" 31, 1880	2,074
" 31, 1881	2,753
" 31, 1882	7,483
" 31, 1883	6,063
" 31, 1884	3,753
" 31, 1885	1,858
" 31, 1886	2,657
" 31, 1887	2,036
" 31, 1888	2,655
" 31, 1889	4,416
" 31, 1890	2,955
" 31, 1891	3,523
" 31, 1892	4,840
" 31, 1893	4,067
" 31, 1894	3,209
December 31, 1895	2,394
" 31, 1896	1,857
" 31, 1897	2,384
" 31, 1898	4,848
" 31, 1899	6,689
June 30, 1900	7,426
" 30, 1901	8,167
" 30, 1902	14,673
" 30, 1903	31,383
" 30, 1904	26,073
" 30, 1905	30,819
" 30, 1906	41,869
Nine months ended March 31, 1907	21,647
Year ended March 31, 1908	30,424
" " 31, 1909	39,081
" " 31, 1910	41,568
" " 31, 1911	44,479
" " 31, 1912	39,151

N. O. COTE,
Chief of Branch.

DEPARTMENT OF THE INTERIOR,
LAND PATENTS BRANCH,
OTTAWA, June 27, 1912.

Q.—Statement showing the number of Pre-emptions, Purchased Homesteads and South African Volunteer Homesteads granted in each Land Agency during the Fiscal Year, 1911-12.

Agency.	Pre-emptions.	Purchased Homesteads.	South African Volunteer Homesteads.
Battleford	274	116	156
Brandon			
Calgary	2,143	141	242
Dauphin			3
Edmonton	20	20	180
Estevan	506	46	17
Grande Prairie			157
Humboldt			79
Kamloops			
Lethbridge	160	23	11
Medicine Hat	1,800*	121†	217‡
Moosejaw	2,229	199	160
New Westminster			
Peace River			138
Prince Albert	3	5	68
Regina	13	11	5
Red Deer	352	112	51
Saskatoon	879	425	113
Swift Current	1,832	183	156
Winnipeg			3
Yorkton			27
Total	10,211	1,408	1,783

* 793 Sask., 1,007 Alta. † 58 Sask., 63 Alta. ‡ Sask., 100 Alta.

Provinces.	Pre-emptions.	Purchased Homesteads.	South African Volunteer Homesteads.
Manitoba			6
Saskatchewan	6,529	1,043	920
Alberta	3,682	365	857
British Columbia			
Total	10,211	1,408	1,783

N. O. COTE,
Chief of Branch.

Department of the Interior,
Land Patents Branch,
Ottawa, June 27, 1912.

R.—STATEMENT showing the number of Homesteads, Pre-emptions, Purchased Homesteads and South African Volunteer Homesteads granted during each month from April 1, 1911, to March 31, 1912.

Month.	Homesteads.	Pre-emptions.	Purchased Homesteads.	South African Volunteer Homesteads.
1911.				
April	4,610	1,136	134	160
May	4,308	1,056	142	179
June	4,680	1,283	181	245
July	4,361	1,255	168	219
August	4,054	1,213	164	196
September	3,247	878	122	194
October	2,969	845	107	187
November	2,650	701	91	196
December	2,099	490	99	207
1912.				
January	1,685	399	64	
February	1,940	428	64	
March	2,698	527	72	
Total	39,151	10,211	1,408	1,783

N. O. COTE,
Chief of Branch.

DEPARTMENT OF THE INTERIOR,
LAND PATENTS BRANCH,
OTTAWA, June 27, 1912.

S.—STATEMENT showing South African Volunteer Bounty Land Certificates of 320 acres each, issued under the Volunteer Bounty Act, 1908, by the Department of the Interior during the Fiscal Year ended March 31, 1912.

	No.	Acres.
Certificates issued	135	43,200
Certificates located	1,783	570,560

N. O. COTE,
Chief of Branch.

DEPARTMENT OF THE INTERIOR,
LAND PATENTS BRANCH,
OTTAWA, June 27, 1912.

T.—STATEMENT of Entries affecting Dominion Lands which were made at Head Office during the year ended March 31, 1912.

— —	No. of Grants.	Acres.
Special Grants	226	9,784·00
Calgary and Edmonton Railway Co.		23,305·00
Canadian Northern Railway Co.		3,075·50
Canadian Pacific Railway Co. (Main line)		6,123·38
Qu'Appelle, Long Lake and Saskatchewan Railroad and Steamboat Co.		14,176·56
Area granted to the Grand Trunk Pacific Railway Company for right of way.		1,579·09
Railway right-of-way	124	1,691·85
Hudson's Bay Company's grants	24	248,819·00

N. O. COTE.
Chief of Branch.

DEPARTMENT OF THE INTERIOR,
LAND PATENTS BRANCH,
OTTAWA, June 27, 1912.

U.—COMPARATIVE STATEMENT of the Homestead Entries and Sales made during the Fiscal Years ending March 31, 1911, and March 31, 1912, respectively.

—	Fiscal Year ending March, 31, 1911.		Fiscal Year ending March 31, 1912.	
	No. of entries.	Acres.	No. of entries.	Acres.
Homesteads	44,479	7,166,640	39,151	6,264,160
Sales		443,673	1,070	52,517

N. O. COTE,
Chief of Branch.

DEPARTMENT OF THE INTERIOR,
LAND PATENTS BRANCH,
OTTAWA, June 27, 1912.

V.—STATEMENT showing the number of Assignments recorded in the Land Patents Branch during the Fiscal Year ended March 31, 1912.

Number of deeds registered	373
Fees received in connection therewith	$717.50

N. O. COTE,
Chief of Branch.

DEPARTMENT OF THE INTERIOR,
LAND PATENTS BRANCH,
OTTAWA, June 27, 1912.

W.—STATEMENT of Land Entries Cancelled during the year ended March 31, 1912.

Year in which Entry was Made.	Manitoba.						Saskatchewan.													Alberta.												British Columbia.					
	Home-steads.			Pre-emptions.			Home-steads.			Pre-emptions.			Purchased Homesteads			Sales.				Homesteads.			Pre-emptions.			Purchased Homesteads			Sales			Home-steads.		Sales			
	Cause of Cancellation.						Cause of Cancellation.													Cause of Cancellation.												Cause of Can.					
	Abandonment.	Default.	Error, &c.	Abandonment.	Default.	Total.	Abandonment.	Default.	Error, &c.	Abandonment.	Default.	Error, &c.	Abandonment.	Default.	Error, &c.	Abandonment.	Default.	Error, &c.	Total.	Abandonment.	Default.	Error, &c.	Abandonment.	Default.	Error, &c.	Abandonment.	Default.	Error, &c.	Abandonment.	Error, &c.	Total.	Abandonment.	Default.	Abandonment.	Default.	Total.	Grand Totals.
1912	5	...	2	...	...	7	10	...	1	3	...	1	...	...	1	...	...	...	16	12	2	2	...	...	2	...	...	...	...	...	18	...	...	...	...	...	41
1911	261	67	14	1	1	344	2104	499	31	626	95	12	30	3	3	1	...	...	3404	1851	427	27	441	80	15	31	5	2	1	1	2884	22	10	...	...	32	6664
1910	334	204	...	1	...	539	2413	2121	14	1064	768	6	35	13	3	3	4	3	6447	1715	1808	8	765	807	2	23	5	2	...	...	5135	16	18	1	...	35	12156
1909	101	92	...	...	1	194	344	579	1	208	273	1	11	4	...	2	...	...	1423	330	669	2	220	317	3	...	2	...	...	...	1543	7	10	...	...	17	3177
1908	88	105	...	...	...	193	139	307	3	111	118	1	2	...	...	3	...	...	684	106	266	2	76	77	...	...	...	...	2	...	529	6	6	...	...	12	1418
1907	29	46	1	...	...	76	76	170	1	...	...	...	...	...	...	...	...	...	247	42	147	2	...	...	...	...	...	...	...	...	191	...	5	...	...	5	519
1906	21	39	...	...	...	60	58	282	5	...	...	...	...	...	...	1	...	...	346	29	150	2	...	...	...	...	...	...	...	...	181	1	...	...	...	1	588
1905	12	10	...	...	...	22	21	72	...	...	...	...	...	...	...	...	...	...	93	7	17	...	...	...	...	...	...	...	...	...	24	...	2	...	...	2	141
1904	5	7	...	...	...	12	12	18	...	...	...	...	...	...	...	...	...	...	30	8	11	...	...	...	...	...	...	...	...	...	19	...	2	...	...	2	63
1903	10	10	4	...	...	24	10	18	...	...	...	...	...	...	...	...	...	...	28	4	26	...	...	...	...	...	...	...	...	...	30	...	...	...	...	...	82
1902	2	4	...	...	...	6	1	6	...	...	...	...	...	...	...	...	...	...	7	3	2	...	...	...	...	...	...	...	...	...	5	...	1	...	...	1	19
1901	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	3
1900	1	3	...	...	...	4	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	5
1899	2	2	...	...	...	4	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	1	6
1898	1	1	...	...	...	2	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
1897	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
1896	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	2
1895	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	1
1894	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1893	...	2	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	1	4	6
1892	1	1	...	...	...	2	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
1891	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1890	1	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
1889	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
1888	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1887	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

1886	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	1	....	1	....	....	....	....	....	....	....	....	....	1	....	1	....	....	1	3
1885	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1884	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1883	....	....	....	....	....	....	....	....	....	1	1	....	....	....	....	....	....	....	2	....	1	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	3
1882	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1881	....	1	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
1880	....	1	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
Tot.	874	596	21	2	2	1495	5189	4076	56	2013	1257	21	78	20	7	10	4	3	12734	4109	3529	45	1505	1281	22	54	12	4	3	1	10565	52	61	1	1	115	24909

N. O. COTE,
Chief of Branch.

Department of the Interior,
Land Patents Branch,
Ottawa, June 27, 1912

X.—STATEMENT showing the number of acres of swamp lands in Manitoba transferred by Orders in Council to the Province of Manitoba to March 31, 1912.

Total area transferred to March 31, 1911	2,009,368·06
Order in Council dated October 5, 1911	3,048·20
Total area transferred	2,012,416·26

N. O. COTE,
Chief of Branch.

DEPARTMENT OF THE INTERIOR,
LAND PATENTS BRANCH,
OTTAWA, June 27, 1912.

Y.—UNCLAIMED LAND WARRANTS issued to Members of the Red River Expeditions of 1870, 1871, 1872 and 1873, and to members of the Northwest Mounted Police.

These warrants entitle the grantee or his assignee to a free grant, without actual residence or settlement duties, of a quarter-section of Dominion lands, containing 160 acres of the class open to homestead entry in the Provinces of Manitoba, Saskatchewan or Alberta.

FIRST OR ONTARIO BATTALION OF RIFLES.

No. of Warrant.	Name of Warrantee.	Rank.	Remarks.
0067	Frederick Amandres	Private.	
0103	George Henry Brown Lee	"	
0151	John Walker Babcock	"	
0170	François Bonneille	"	
0252	Albert Carney	"	
0263	John Davidson	"	
0310	G. Eastman	"	
0320	Charles Forman	"	
0433	Wellington Hawley	"	
0497	William H. Low	"	
0549	William Massey	Qr. Master Sergt.	
0577	R. J. Moore	Private.	
0593	Alfred Morgan	"	
0674	C. Nilson	Colour Sergt.	
0755	Daniel Rutherford	Private.	
0756	William George Rogers	"	
0757	William Ray	"	
0758	Alexander Rogers	"	
0918	Wellington F. Walker	"	

Unclaimed Land Warrants, etc.—*Continued.*

SECOND OR QUEBEC BATTALION OF RIFLES.

No. of Warrant.	Name of Warrantee.	Rank.	Remarks.
0063	James Atkinson	Private.	
0107	John Brown	"	
0111	John Belair	"	
0124	John Butterworth	"	
0142	Philippe Bergeron	"	
0144	Emile Blais	"	
0182	Charles Brunet	"	
0185	Lionel Barre	"	
0188	Xavier Barril	"	
0229	Joseph Cayen	"	
0231	Palery Cousineau	"	
0236	Jean Caron	"	
0249	Albert Chandler	"	
0274	Samuel Davis	"	
0284	Napoléon Desroses	Corporal.	
0285	Thomas Donavan	"	
0299	Michael Donnelly	"	
0312	William Ellis	Private.	
0328	Jacques Flamand	"	
0331	Edward Finnerty	"	
0337	Henry Fieldhouse	"	
0369	Robert Gilroy	"	
0370	Richard Gibson	"	
0376	Alexis Gamache	"	Assigned to Nicol Milloy of Toronto.
0380	William Gilvey	"	
0412	George Harflett	"	
0424	John Harrison	"	
0427	John Hogan	"	
0428	Joseph Houle	"	
0436	Joseph Hiroux	"	
0450	Andrews Henry	"	
0484	Joseph Kelly	"	
0517	Joachim Lafranchise	"	
0520	Thomas Lee	"	
0531	Thomas Labbé (No. 201)	"	
0532	Napoléon Larose	"	
0536	Frédéric Longmuir	"	
0558	Pierre Moisan	"	
0559	Samuel Maddaford	"	
0587	Isidore Michaud	"	
0589	William Murray	"	
0597	Napoléon Melançon	"	
0625	Angus McDiarmid	"	
0641	Thomas McNicol	"	
0657	Frederick McIver	"	
0678	Timothy O'Bryan	"	
0679	Hugh O'Loghlan	"	
0680	Michael Ouellette	"	
0705	Alexander Berault	"	
0714	Reuben Paul	"	
0717	Henry Potter	"	
0722	Alphonse Quintal	"	
0738	Tom. Hodgson Rule	"	
0760	George Robinson	"	
0761	Charles Rondeau	"	
0762	Arthur Roy	"	
0766	Louis Ross	"	
0812	John Seddon	"	
0818	Alfonse St. Onge	"	
0822	Pierre St. Armand	"	
0823	William Snider	"	
0830	Moïse St. Pierre	"	
0834	.... Smith (No. 398)	Corporal.	
0839	Charles I. Stuart	Private.	
0840	W. Sinclair	Corporal.	

Unclaimed Land Warrants, etc.—*Concluded.*

SECOND OR QUEBEC BATTALION OF RIFLES.—*Concluded.*

No. of Warrant.	Name of Warrantee.	Rank.	Remarks.
0852	Didier Tremblay	Private.	
0853	Baron Taylor	"	
0866	James Trevor	"	
0870	George Taylor	"	
0871	J. McTerreridge	"	
0880	Francis Vaillancourt	"	
0883	Ignace Vallière	"	
0909	George Henry Welland	"	
0924	John Wyatt	"	
0929	James Ward	"	

EXPEDITION OF 1871.

No. of Warrant.	Name of Warrantee.	Rank.	Remarks.
0957	William Chisholm	Private.	
1026	James Bond	"	Assigned to Alex. McMicken of Winnipeg.
1044	Chs. L. M. G. Chasse	"	" " "
1076	Willliam Kellock	Sergeant.	" " "
1112	Robert William Turner	"	" " "
1121	Frederick Vogt	Private.	Assig. to Albert N. Carpenter of Winnipeg.
1383	William R. Johnston	"	
1405	Francis R. Whittaker	"	Assigned to Wm. W. Davey, of Kincardine, Ont.

EXPEDITION OF 1872.

No. of Warrant.	Name of Warrantee.	Rank.	Remarks.
1392	James McDonell	Private.	
1481	William Smith	"	

EXPEDITION OF 1873.

No. of Warrant.	Name of Warrantee.	Rank.	Remarks.
1245	Paul Adams	Private.	
1354	William Brown	"	
1363	Francis Phair	"	
1370	Richard Bodwick	"	
1372	Jean Boire	"	
1381	John Harrigan	"	
1402	William Sturney	"	
1404	George Telford	"	
1412	Joshua Walker	Corporal.	

NORTHWEST MOUNTED POLICE.

No. of Warrant.	Name of Warrantee.	Rank.	Remarks.
0027	Simon Taylor	Sub-Constable	Former address Toronto.
0029	Wm. L. Spotten	" "	" " "
0035	Robert Heywood	" "	" " Orillia, Ont.
0037	Ernest George	" "	" " Quebec.
0088	Richard Goldsworthey	" "	" " Halifax.
0265	William Johnson	" "	" " Osgoode, Ont.
0074	Augustus Schrodder	" "	" " Quebec.
0325	James Battersby	Constable	" " Macleod, Alta.

N. O. COTE,
Chief of Branch.

Department of the Interior,
Land Patents Branch,
Ottawa, June 27, 1912.

No. 30.

REPORT OF THE ORDNANCE AND ADMIRALTY LANDS BRANCH.

Department of the Interior,
Ottawa, June 29, 1912.

W. W. Cory, Esq., C.M.G.,
Deputy Minister of the Interior,
Ottawa.

Sir,—I have the honour to submit the following report, relative to the work carried on in connection with this branch of the department during the fiscal year ending March 31, 1912.

Within the period covered by this report there were no public sales of ordnance lands held, but, with respect to lands formerly sold or occupied under lease with the option of purchasing such leasehold property upon payment in cash of the amount of the purchase price, 26 full lots and 12 part lots situated in the several localities hereunder named and in the subjoined statement marked 'A.' have been fully redeemed and letters patent issued therefor.

1. Edmundston, N.B.—One lot forming part of the Ordnance reserve in this locality and disposed of at a sale by public auction held in 1890, for the sum of $160, was paid for in full and letters patent issued, the balance of the purchase money, $34.80, having been received within the fiscal year.

2. Grand Falls, N.B.—Six town lots and ten farm lots, located within the boundaries of this reserve and which were sold by public auction on sundry dates for the sum of $1,079.25, have been fully paid for and patents issued. The balance of purchase money received during the fiscal year was $632.44.

3. Isle de Grace.—The ordnance reserve at this point which covers the northeasterly and southeasterly portions of the island was leased to Mr. Duquesclin Magnan, of Sorel, for a period of ten years, under the authority of an order in council.

4. Nepean.—A parcel of land situated in lot letter 'I.,' concession 'C.,' of this township, originally acquired for the purposes of the Rideau Canal, was conveyed by letters patent to the successors in title of the late John Mutchmore, the consideration money having been previously paid.

Before the issue of the patent, however, the legal representatives of the late John Mutchmore filed a petition of right claiming a reconveyance from the Crown of all that portion of lot 'I.,' situated at the southwesterly angle of the said lot lying outside a reserve of one chain back from the water's edge of the canal. The Crown granted the prayer of the petitioners and the case was argued in the Exchequer Court, with the result that judgment was rendered in favour of the Crown.

5. Niagara-on-the-Lake.—One lot being part of the subdivision of the property known as the 'Hospital Lots,' situated in this town and which was previously sold for the sum of $268, was paid for in full and letters patent issued. The balance of purchase money received within the year was $214.40.

6. Ottawa.—Four whole lots and nine part lots situated in this locality and held under the provisions contained in the original leases granted by the Imperial authori-

ties, one of such provisions being that the leasehold may be converted into a freehold upon payment, in cash, of the purchase price fixed on these lots, were paid for in full and letters patent issued. The total amount of consideration money received during the past year was $1,440.66.

7. Owen Sound.—A portion of the southerly ordnance reserve situated within the limits of this town was transferred, by the authority of an order in council, to the Department of the Naval Service.

8. Point Pelee.—At the time the reserve in this locality was handed over by the Imperial authorities to the Government of Canada, it was found that various portions of the property were occupied by squatters, and these were permitted to acquire titles to their holdings upon furnishing satisfactory proof and paying for the land at the rate of $1 per acre, plus a proportionate part of the cost of survey. Two of these squatters having proved title to their respective holdings and paid the purchase price, were granted letters patent. The amount of consideration money received was $53.45.

9. St. John, N.B.—A small parcel of land forming part of Fort Howe Military Reserve, which was previously occupied with the assent of the Crown, was transferred from class one to class two of Ordnance and Admiralty Lands for the purpose of being sold and patented to the occupant. The amount received for this parcel of land was $350 cash.

10. Toronto.—Two lots forming part of the ordnance property known as 'Victoria Square' in this city, which were disposed of in 1871 at a sale by public auction, were patented; the purchase price therefor having been paid in full. Owing to the fact that satisfactory proof of title was not furnished until quite recently, the issue of letters patent was held pending the filing of such proof.

11. Turkey Point.—A portion of the Ordnance Reserve at this point, which is largely composed of marsh land, has been occupied by Mr. James L. Duncan and his predecessor in title for upwards of fifty years. The parcel of land so occupied contains 79·75 acres more or less, and this was sold and patented to the occupant, under the authority of an order in council, and in accordance with the provisions of the Ordnance and Admiralty Lands Act. The sum of $79.75, being the purchase price, was paid in cash.

The following statements are subjoined:—

A. Statement showing the number of lots and part lots sold or redeemed, the amounts for which such lots were originally sold and the sums received within the fiscal year as consideration or balance of purchase money.

B. Statement giving the names of the several localities where ordnance lands are situated and the amounts received on account of such land during the fiscal year. The net revenue received was $11,486.55, an increase of $5,528.29 over that of last year.

C. Statement showing the receipts for each month classified as fees, rent or interest and principal.

D. Statement showing the sums due and unpaid at the close of the fiscal year as instalments of purchase money and rent or interest. The total amount shown to be outstanding is $59,235.79, a decrease of $874.39 from that of last year.

The correspondence in connection with this branch averages about the same as in former years while the office work generally shows a marked increase. The number of letters received, recorded and filed was 477; number of letters written, copied, indexed and mailed 408. In addition there were 145 accounts prepared and rendered;

132 receipts issued and 79 reports on various subjects pertaining to ordnance and admiralty lands prepared and submitted. There were 54 assignments received, examined and registered, an increase of 41; 32 draft letters-patent prepared, an increase of 18 over the previous fiscal year.

The accounts with purchasers and tenants of ordnance lands now open in the books of this branch number 171, these have been carefully and regularly posted; the receipt book, cash book and monthly statement book have been diligently kept and a monthly return of all moneys received regularly forwarded to the Accounts Branch.

I beg to supplement the foregoing report on the work pertaining to ordnance and admiralty lands by a synopsis of the work carried on in connection with the copying, comparing, recording, indexing, printing and filing copies of all the orders in council passed from time to time, relative to the administration of this large and rapidly expanding department. The number of orders in council passed during the year was 773, an increase of 125 over last year. The extent and importance of the work performed in connection with these valuable records, in order that copies thereof may be constantly available, cannot be over-estimated.

All orders in council, as received, are copied, compared and recorded in a register kept expressly for that purpose. Requisitions on the superintendent of printing are issued for printed copies of all orders in council, the proof is carefully read and corrected and when the printed copies are received these are checked, numbered and filed for future requirements.

During the year there were 442 requisitions issued, 382 orders in council were published in the *Canada Gazette* and of these 40 were likewise published in the *British Columbia Gazette*.

Owing to the insufficiency of the staff and the increase in the work of this branch, such increase being largely due to the amount of detail necessary in keeping the record of attendance for the whole staff of this department, the increased number of orders in council and the many searches made for titles and other information, for which there is nothing tangible to show, I am unable to report any material progress in the way of additional bound volumes of orders in council. However, with the help of additional clerical assistance, for which I have already applied, I hope to soon resume that work and carry it on to a satisfactory conclusion.

The volume and importance of the work performed in this branch in connection with the keeping of the record of attendance of the officials in the various branches of this department, may be easily estimated when attention is called to the fact that this record embraces absences for any and all causes and forms the basis of the monthly pay lists, as well as of the quarterly report prepared and furnished in accordance with the provisions of the Civil Service Amendment Act, 1908.

I have the honour to be, sir,

Your obedient servant,

JOS. P. DUNNE,

Clerk in Charge of Ordnance and Admiralty Lands.

A.—STATEMENT giving the number of Lots and Part Lots sold or redeemed, the amount for which such lots were originally disposed of and the sums received as instalment or balance of purchase moneys during the Fiscal Year ending March 31, 1912.

Locality	Number of lots sold or redeemed.	Amt. of consideration or purchase money.	Amt. rec'd on a/c during fiscal year.	Remarks.
		$ cts.	$ cts.	
Charlotteville	pt. Lot	79 75	79 75	Consideration in full.
Edmundston	1 Lot	160 00	38 40	Bal. purchase money.
Gloucester		Confirmatory.		
Grand Falls	4 Town Lots.	366 00	272 80	Bal. purchase money.
	10 Farm Lots.	553 25	319 64	do do
	2 Mill Res.	160 00	40 00	
		1,079 25	632 44	
Nepean	pt. Lot.	20 00		Previously paid.
Niagara	1 Lot.	268 00	214 40	Bal. purchase money.
Ottawa	4 Whole Lots	654 16	654 16	Consideration in full.
	8 Half Lots.	786 50	786 50	
	1 pt. Lot	74 16		Previously paid.
		1,514 82	1,440 66	
Point Pelee	2 Lots	53 45	53 45	Consideration in full.
St. Johns	pt. Res.	350 00	350 00	Consideration in full.
Toronto	2 Lots	658 66		Previously paid.
		4,183 93	2,809 10	

JOS. P. DUNNE,

Clerk in Charge of Ordnance and Admiralty Lands.

B.—Statement naming the various localities where Ordnance Lands are situated on account of which moneys have been received during the fiscal year ending March 31, 1912.

Locality—	
Amherstburg	$ 2 00
Burlington	100 00
Chambly	261 75
Charlotteville	79 75
Edmunston	81 00
Elmsley	13 70
Fort Cumberland	75 00
Fort Erie	1 00
Grand Falls	1,052 50
Grenville	2 40
Kingston	352 50
Niagara	393 69
Oromocto	25
Ottawa	2,525 24
Owen Sound	79 00
Oxford	12 00
Point Pelee	117 02
Port Maitland	5 00
Prescott	2 00
Quebec	830 00
Queenston	2 00
St. Johns	350 00
St. Joseph's Isle	34 20
Sarnia	200 00
Shelburne	3 00
Sorel	39 72
South Crosby	2 00
Toronto	4,804 74
	11,421 46
Fees	145 00
	11,566 46
Refunds	79 93
Total	11,486 53

JOS. P. DUNNE,

Clerk in charge of Ordnance and Admiralty Lands.

C.—STATEMENT showing receipts each month of the year classified as Fees, Rent or Interest equivalent to Rent and Principal.

Month.	Fees.	Rent or interest.	Principal.	Total.
	$ cts.	$ cts.	$ cts.	$ cts.
April	4 00	1,681 65	3 30	1,688 95
May	....	412 71	301 80	714 51
June	22 00	1,102 85	521 36	1,646 21
July	28 00	286 14	316 78	630 92
August	24 00	103 48	565 10	692 64
September	....	51 60	3,438 35	3,489 95
October	....	204 22	575 49	779 71
November	8 00	328 65	563 57	900 22
December	5 00	59 09	135 82	199 91
January	36 00	329 15	....	365 15
February	8 00	240 29	199 75	448 04
March	10 00	25	....	10 25
	145 00	4,800 08	6,621 38	11,566 46
Refunds—				
August			66 18	
November			5 41	
December			34	
March			8 00	79 93
Total				11,486 53

JOS. P. DUNNE,

Clerk in Charge of Ordnance and Admiralty Lands.

D.—STATEMENT showing amounts due and unpaid on account of Purchase Money and Rent or Interest for the Fiscal Year ending March 31, 1912.

Locality.	Rent or Interest.	Principal.	Total.
	$ cts.	$ cts.	$ cts.
Beaver Harbour	14 00		14 00
Burlington	180 00		180 00
Carillon	5 80		5 80
Chambly	273 60	152 00	425 60
Dalhousie	15 18	23 00	38 18
Fort Cumberland	153 00		153 00
Fort Erie	1 00		1 00
Grand Falls	278 97	650 47	929 44
Kingston	1 00		1 00
Marlborough	4 00		4 00
Nepean	62 00		62 00
Niagara	50 70	338 00	388 70
Ottawa	2,465 10		2,465 10
Owen Sound	37 50		37 50
Oxford	5 60		5 60
Presqu'Isle	1 00		1 00
St. Croix	5 00		5 00
Sorel	1,460 28		1,460 28
Tay	12 00		12 00
Toronto	820 52	52,000 00	52,820 52
Turkey Point	18 67		18 67
Wolford	207 40		207 40
	6,072 32	53,163 47	59,235 79

JOS. P. DUNNE,

Clerk in Charge of Ordnance and Admiralty Lands.

No. 31.

REPORT OF THE CORRESPONDENCE REGISTRATION BRANCH.

Department of the Interior,
Correspondence Registration Branch,
Ottawa, April 18, 1912.

W. W. Cory, Esq., C.M.G.,
Deputy Minister of the Interior,
Ottawa.

Sir,—I have the honour to place before you a report of the work of the registration branch of the department for the fiscal year which ended with March 31 last.

Statement 'A.' shows the number of letters recorded and the amount of money received and sent to the accountant during the year.

Statement 'B.' shows the growth of the work year by year for the past thirteen years.

Letters or parcels enclosing cash, cheques, money orders, &c., reached a total of 14,389.

There were 2,498 telegrams received and registered. Letters written in foreign languages, translated into English, numbered 2,068.

There were 1,052,896 fyles distributed to the several branches and at present there are 9,500 fyles being acted on or awaiting action throughout the department.

There were 363,225 letters received and dealt with and 272,419 were numbered and recorded.

Each succeeding year sees the departmental offices become more scattered about the city, necessitating great loss of time and consequent delay in the handling of correspondence. To do the work expeditiously it was necessary to secure extra assistance and the following clerks were engaged for varying periods: G. Ferguson, W. B. Megloughlin, L. H. Moore, E. J. Foley, J. E. Spero, R. M. Cairns, P. Moyer, J. F. Maunder, Bruno Grandmount, E. Cyr, R. T. Young, A. E. Cuzner, B. M. Frith, D. Gordon, H. Desjardin, J. B. Corcoran, Harry McKercher, J. C. O'Neil, R. de Puyjalon, Eugene Frechette, Oscar Cousineau, G. A. McHugh, M. Bissonette, H. Giroux, Miss E. Lynch and Miss H. Courtney.

J. M. ROBERTS,

Chief of Branch.

A.—STATEMENT showing the number of Letters recorded and the Money received during the Fiscal Year ended March 31, 1912.

1911.	Letters Recorded.	Daily Average.	Registered Received.	Letters Sent.	Money Received.
					$ cts.
April	20,135	875	1,696	2,538	116,891 47
May	26,065	1,042	1,728	1,917	380,907 68
June	25,160	1,048	1,657	2,008	337,008 02
July	31.213	1,249	1,761	2,083	181,001 71
August	23,427	901	1,720	2,191	90,565 99
September	22,324	896	1,621	2,117	134,515 08
October	22.570	903	1,872	2,139	210,845 35
November	22.022	881	1,787	2,303	238,074 26
December	20,246	810	1,761	2,283	198,560 74
1912.					
January	20.835	833	1,978	2.641	149,226 48
February	19,180	800	1,871	2,370	168,112 88
March	19,242	740	1,857	2,612	171,393 00
Total	272,419		21,309	27,202	2,377,102 66

J. M. ROBERTS,
Chief of Branch.

DEPARTMENT OF THE INTERIOR,
CORRESPONDENCE REGISTRATION BRANCH,
OTTAWA, April 18, 1912.

B.—STATEMENT showing the number of Letters recorded and Money received during each Fiscal Year from 1900 to March 31, 1912.

Fiscal Year.	Letters Recorded.	Money Received.
		$ cts
1900	48,663	200,831 71
1901	67,860	333.534 02
1902	67,722	382,999 87
1903	87,851	629,585 47
1904	113,074	630,355 44
1905	135,908	528.219 76
1906	176,729	875,933 54
1907 (nine months).	150,462	1,337,780 94
1908	187,684	1.558.230 32
1909	260,142	1,798,276 17
1910	264,209	2,381,605 39
1911	279,186	2,220,117 97
1912	272,419	2,377,102 66

J. M. ROBERTS,
Chief of Branch.

DEPARTMENT OF THE INTERIOR,
CORRESPONDENCE REGISTRATION BRANCH,
OTTAWA, April 18, 1912.

No. 32.

REPORT OF THE CORRESPONDENCE COMPARING AND MAILING BRANCH.

W. W. Cory, Esq., C.M.G.,
Deputy Minister of the Interior,
Ottawa.

Sir,—I have the honour to submit to you, herewith, a statement showing the work done in the Correspondence Comparing and Mailing office of the Department of the Interior during the fiscal year ended March 31, 1912.

I have the honour to be, sir,
Your obedient servant,
CHAS. C. PELLETIER,
Clerk in Charge.

Statement of the work done in the Correspondence Comparing and Mailing Branch during the Fiscal Year ended March 31, 1912.

From April 1, 1911, to March 31, 1912.	Letters sent.	Registered letters sent.	Telegrams sent.	Totals.
1911.				
April	28,047	2,538	128	30,713
May	31,579	1,917	282	33,778
June	31,300	2,008	276	33,584
July	37,194	2,083	271	39,548
August	35,092	2,191	287	37,570
September	30,645	2,117	167	32,929
October	33,752	2,139	196	36,087
November	34,115	2,303	188	36,606
December	27,610	2,283	259	30,152
1912.				
January	37,305	2,641	200	40,146
February	34,124	2,370	192	36,686
March	40,408	2,612	222	43,242
Total for fiscal year ending March 31, 1912	401,171	27,202	2,668	431,041

The out-going letters were copied in 161 one-thousand paged letter-books, compared with 159 letter-books for the same period last year.

The number of pages of letter-books indexed was 161,129.

The daily average of letters sent out was 1,360.

The heaviest average was during the month of March, the daily average being 1,616. The lightest month was April with an average of 1,213.

There were 1,500 documents compared.

The grand total for this office during the fiscal year 1911-12 was 431,041, an increase of about 17,431 letters over last year.

CHAS. C. PELLETIER,
Clerk in Charge,
Correspondence Comparing and Mailing Branch.

No. 33.

REPORT OF THE CHIEF GEOGRAPHER.

Department of the Interior,
Office of the Chief Geographer,
Ottawa, April 15, 1912.

W. W. Cory, Esq., C.M.G.,
Deputy Minister of the Interior,
Ottawa.

Sir,—I have the honour to report as follows on the work of my office for the fiscal year 1911-12.

The staff as constituted at the end of the period mentioned was as follows:—

E. D. Bryant, chief draughtsman: compilation of Cornwall and part of Yarmouth sheets, preparing tracing for photo-litho, Saskatchewan map.

W. Anderson: revising and bringing up to date the maps of the Prairie provinces.

Jas. Beveridge: revising some of the Ontario Standard sheets, compilation of Yarmouth sheet and revision of Bank, Milling and Elevator maps.

H. Tache: compiling Sheet 12, Quebec, revising Sheet 13. New Brunswick, and completing map of New Brunswick.

F. Inkster: revising some of the Ontario Standard sheets, large Railway map of Canada, preparing tracing for photo-litho map of Manitoba.

A. M. Darrach: preparing Sheets 20 and 21, Alberta.

H. Blatchley: revising Ontario Standard sheets, preparing tracings for Saskatchewan map and miscellaneous draughting work.

Geo. Dumouchel: compilation of Sheet 7, Sault Ste. Marie.

H. W. Wilson: revising sectional sheets and Land District maps of the Prairie Provinces.

A. A. Linnell: revising Sheet 11, compilation of part of the work for Quebec sheets.

S. Chandler: tracing railway plans and keeping record of all railway plans. With Mr. Wilson, spent some time in Quebec preparing work for use of this office.

A. Groulx: completing railways on sectional sheets for office use, tracing plans, making reductions.

J. P. McElligott: tracing plans, making reductions, miscellaneous work.

J. Pigeon: making reductions, preparing Sheet 32, Quebec, miscellaneous work.

W. B. Cole: preparing part of tracing for photo-litho, Alberta and Saskatchewan map, compilation French River and Muskoka sheets.

C. Marchand: tracing plans, making reductions, miscellaneous office work.

J. Bennie, R. W. Craig, W. A. Blue: statistical work, preparing data for economic maps, general office work.

A. Akerlindh, J. S. Gagnon: in charge of distribution.

Mrs. D. E. Waine, Miss M. Stewart, stenographers.

F. H. Woggon, messenger.

Sheet 3 N.W., Kingston, and Sheet 7, Sault Ste. Marie, of the Standard Topographical sheets, have beeen issued during the year, and a map on the same scale showing the country around Cobalt, Gowganda and Porcupine was issued, to supply the demand for it. The Windsor, London, Hamilton, Ottawa and Prince Edward Island sheets have beeen revised and new editions issued.

New editions have beeen issued of the large and small railway maps, on a scale of 35 miles and 100 miles to 1 inch, respectively, land district maps of all Dominion land agencies, maps of Saskatchewan and Alberta have beeen issued as Province maps, replacing the former four sheet map.

During the year, 221,356 maps (sheets) and 10,426 letters have beeen sent and 9,661 letters received.

I have the honour to be, sir,

Your obedient servant,

J. E. CHALIFOUR,

Chief Geographer.

No. 34.

REPORT OF THE SURVEY RECORDS BRANCH.

DEPARTMENT OF THE INTERIOR,
SURVEY RECORDS BRANCH,
OTTAWA, April 15, 1912.

W. W. CORY, Esq., C.M.G.,
Deputy Minister of the Interior,
Ottawa.

SIR,—I have the honour to submit the attached detailed statement, which shows this to have been an average year in the work of the branch.

There were an unusual number of changes in the staff during the year.

The congested condition of the office is again referred to, and we are now subjected to inconvenience in the conduct of the work, and this must soon entail great loss as well. File cases are now ordered for which we have no room, and other cases, needed at once, cannot be ordered as we have no space in which to put them.

All of which is respectfully submitted.

C. J. STEERS,

Clerk in Charge.

STATEMENT of work performed in the Survey Records Branch for the year ending March 31, 1912.

Files received and dealt with	20,529
Letters drafted	5,503
Plans, tracings, &c., compiled and copied	1,003
Original township plans copied	150
Plans copied for timber berths, &c.	1,685
Statutory declarations copied	102
Plans sent agents, registrars, &c.	19,120
Plans sent in answer to special requests	17,738
Pages of field notes copied	841
Prints of plans received and stored	228,940
Original plans received and recorded	1,301
Field notes received and recorded	468
Descriptions written for patents	9
Letters to agents, registrars, &c.	896
Registered parcels mailed	2,306

WORK PERFORMED FOR THE TOPOGRAPHICAL SURVEY BRANCH.

Books searched for	6,914
Books sent	5,246
Books returned	5,170
Plans searched for	2,665
Plans sent	2,144
Plans returned	1,239
Volumes searched for	189
Volumes sent	140
Volumes returned	117

WORK PERFORMED FOR PATENTS BRANCH.

Plans searched for	692
Plans sent	690
Plans returned	785
Books searched for	119
Books sent	118
Books returned	84

WORK PERFORMED FOR OTHER BRANCHES.

Plans searched for	489
Plans sent	489
Plans returned	308
Books searched for	224
Books sent	222
Books returned	190

No. 35.

REPORT OF THE WATER-POWER BRANCH.

DEPARTMENT OF THE INTERIOR,
WATER-POWER BRANCH,
OTTAWA, April 1, 1912.

W. W. CORY, Esq., C.M.G.,
Deputy Minister,
Department of the Interior,
Ottawa.

SIR,—I have the honour to submit the following as the first annual report of the Water-Power Branch, for the fiscal year ended March 31, 1912.

Water-power matters were for years dealt with by the Water-Power Division of the Railway Lands Branch, of which division the undersigned had charge. Under the general direction of the late Mr. R. E. Young, Superintendent of the Railway Lands Branch, the work of that division so increased in scope and importance that it was found necessary to have a separate and distinct branch organized, with a recognized superintendent giving it his entire time and attention. Accordingly a Water-Power Branch was created by Order in Council in December, 1911, shortly after Mr. Young's death, with the undersigned as superintendent. The work of the new Branch consists of the administration of water-powers on Dominion lands, water rights matters within the railway belt of British Columbia, foreshore matters and reclamation.

At the creation of the new branch its Head Office staff consisted of:—

J. B. Challies, Superintendent	Class 1-B
.... Engineer	" 1-B
B. E. Norrish, M.Sc., Engineer	" 2-A
R. S. Stronach, Engineer	" 2-B
A. M. Beale, B.Sc., Engineer	" 2-B
.... Draughtsman	" 2-B
Miss C. J. McIlmoyle, Clerk	" 3-A
Miss I. M. Grant, Stenographer	" 3-B
Miss G. Hewton, Stenographer	Temporary.
D. R. Walters, Messenger	"

The two vacancies on the staff remained unfilled up to the end of the fiscal year.

In February, 1912, the Branch moved into what were then commodious quarters in the Blackburn Building, but these are fast becoming inadequate and some provision will have to be made for housing such of the field staff as will be engaged at Head Office during the winter months preparing reports of their summer's work. It is hoped that added space will be obtainable before the winter of 1912 in the new Union Bank Building now in course of construction.

The growth in the regular routine work of the Branch, the extensive additions to the outside field staff, and all the work incident to the organization of a new branch, have seriously taxed the time and efforts of every member of my staff and I desire to give full tribute to their cheerful, hearty and loyal co-operation. Further clerical assistance is required, and the services of a capable and discerning clerk, of experience in the department, to take charge of filing and indexing, are urgent. On account of the isolation of the Branch it has been found necessary and expedient to establish an indexing and filing system separate and distinct from that of the Registration Branch in the Langevin Block. On account of the many important engineering plans and technical reports of the Branch the indexing and filing system is particularly complicated.

The field work of the Branch is superintended by a member of the outside staff, J. T. Johnston, B.A.Sc. Mr. Johnston is an honour graduate in civil engineering, of the School of Practical Science, of the University of Toronto, and is an Associate Member of the Canadian Society of Civil Engineers. His experience in river regulation and power development investigations has been extensive, and of peculiar value in connection with the work of this Branch. All power and storage investigations and construction work are carried on by competent hydraulic and civil engineers, and when necessary (on account of special difficulties involved or the great importance of the work), the advice of prominent consulting engineers, of recognized standing, is secured.

FIELD STAFF.

The field staff of the Branch consists of:—

Hydraulic Engineer, in charge of field work.—J. T. Johnston, B.A.Sc.

COQUITLAM DAM, B.C.

Consulting Engineer to the Department.—John R. Freeman, C.E.
Resident Inspecting Engineer.—R. S. Stronach.
Clerical Assistant.—A. T. Milner (from January 29, 1912).

HYDROGRAPHIC SURVEYS.

Railway Belt of British Columbia: Headquarters at Kamloops.

Chief Engineer—P. A. Carson, B.A., D.L.S.
Assistant Engineers.—W. M. Carlyle, B.A.Sc. (resigned Feb. 17, 1912).
C. G. Cline, B.A.Sc., D.L.S.
C. E. Richardson, B.A.Sc.
K. H. Smith, B.A. (Sept. 13, 1911-Jan. 26, 1912).
C. R. Adams, of U.S. Hydrographic Survey (April 19-June 30, 1911).
Clerical Assistant.—A. T. Milner (June 5, 1911, to Jan. 29, 1912).

Province of Manitoba: Headquarters, 245 Chamber of Commerce Block, Winnipeg, Manitoba.

Chief Engineer.—D. L. McLean, B.Sc.
Assistant Engineers.—S. S. Scovil, B.Sc.
G. H. Burnham, B.A.Sc.
Clerical Assistant.—A. Perie.

WATER POWER AND STORAGE INVESTIGATIONS.

Winnipeg River System:

Consulting Engineer.—J. B. McRae, C.E., Ottawa.
Chief Engineer.—D. L. McLean, B.Sc.
Assistant Engineers.—E. B. Patterson.
Eyre M. Dann (June 10, 1911-Sept. 1, 1911).
A. M. Beale, B. Sc. (Aug. 8, 1911-June 1, 1912).
Junior Assistant.—Bruce Hogarth (June 10 to Oct. 3, 1911).
Draughtsman.—P. J. Barry.

Bow River System:

Consulting Engineer.—C. H. Mitchell, C.E., Toronto.
Chief Engineer.—M. C. Hendry, B.A.Sc.
Assistant Engineers.—C. H. Attwood (May 10 to Oct. 12, 1911).
K. H. Smith (May 10 to Sept. 13, 1911, and from Feb. 7, 1912, to date).
Junior Assistants.—C. P. Cotton (May 10 to Oct. 2, 1911).
E. R. Dafoe (May 10 to Oct. 2, 1911).

Reclamation Investigations:

Chief Engineer.—Wm. Ogilvie, D.L.S.
Assistant Engineer.—W. C. Gillis, B.Sc. (June 10 to Nov., 1911).

WATER-POWER REGULATIONS.

Regulations governing the mode of granting water-power privileges in the Provinces of Manitoba, Saskatchewan, Alberta and the Northwest Territories, were established by Orders in Council dated June 2, 1909, June 8, 1909, April 20, 1910, and January 24, 1911, pursuant to Section 35 of the Dominion Lands Act.

WATER-POWER DEVELOPMENTS.

Several important power developments have already been carried on to successful completion in the west, notably,—the muncipal deve'opment of the city of Winnipeg at Point du Bois falls on the Winnipeg river, having an ultimate power capacity as at present designed of 65,000 H.P.; the Winnipeg Electric Railway Company's plant on the Pinawa channel of the same river, where some 27,000 H.P. is now regularly developed; (these two developments now supply Winnipeg's power requirements); the plant of the Calgary Power Company at Horseshoe falls on the Bow river, about forty miles from Calgary, furnishing 12,000 H.P., mainly for use in Calgary; the Western Canada Power Company's plant at Stave falls on the Stave river, B.C., having an ultimate capacity of 50,000 H.P.; and the Vancouver Power Company's plant at Coquitlam and Buntzen lakes, developing now about 42,000 H.P., and ultimately, on the completion of the Coquitlam dam, 82,500 H.P. These latter two plants furnish the coast district of British Columbia with power, including the cities of Vancouver and New Westminster, and all city and interurban tramlines.

COQUITLAM DAM.

With regard to the storage dam of the Vancouver Power Company at Coquitlam lake, B.C., Coquitlam lake, situated within 15 miles of the cities of Vancouver and New Westminster, has an area of 2,300 acres; drainage area of about 100 square miles, and an annual precipitation of 150 inches. Its altitude is 432 feet above sea level—thirty-two feet higher than Buntzen lake, of 500 acres in area, and separated from the Coquitlam by a range of mountains 3,000 to 4,000 feet high. The Vancouver Power Company's development as completed in 1906 consisted of a rock-filled timber crib structure, raising the level of Coquitlam lake ten feet ior storage; a tunnel 12,775 feet long, driven through rock, between Lakes Coquitlam and Buntzen; a concrete dam at the outlet of Buntzen lake, giving about 6,000 acre feet of storage in that lake; steel pipes 1,800 feet long connecting this dam to the power house at sea level, on the north arm of Burrard Inlet, where a static head of 400 feet is obtained; and transmission lines to Vancouver, New Westminster, Burnaby and Lulu island. A rapidly increasing power load necessitated the development of the company's scheme to its maximum capacity, and the company's engineers advised the enlargement of the tunnel between Lakes Coquitlam and Buntzen, and the storage of all the waters of Coquitlam lake by means of a new storage dam at its outlet. The condition at the only available site necessitated an earthen dam of the hydraulic-filled type, one entirely new to Canada. In June, 1909, the department was asked to approve of the construction of a large earth dam of the hydraulic-filled type, immediately below the old timber crib dam. Under an agreement, dated March 24, 1910, the company was authorized to proceed with the proposed dam, according to plans to be submitted to, and approved by, the department. The people in the district immediately below were strongly opposed to this type of structure and demanded a dam of the gravity type, either solid concrete or stone. The situation was further complicated on account of Coquitlam lake being the source of domestic water supply for an extensive contiguous territory, including the city of New Westminster, the municipalities of Burnaby, Coquitlam, &c., which will within a few years have a large population. In view of the absolute necessity for the government ensuring a safe and stable structure, for allaying public alarm, and for the protection of the domestic water supply of the city of New Westminster, eminent expert advice was sought, and the services of John R. Freeman, C.E., of Providence, U.S.A., were retained. Under Mr. Freeman's direction a very careful and exhaustive exploration of the Coquitlam site was made, and finally, after many conferences with engineers of the company and of the department, he approved of a satisfactory design, which was formally sanctioned by the department on February 27, 1912. Construction operations have been progressing vigorously since then, under the constant inspection of the department engineer, Mr. R. S. Stronach, representing Mr. Freeman. The retaining of Mr. Freeman as superintending engineer of the design and construction of this dam, and of the sanitary conditions of the whole Coquitlam reserve, has almost entirely allayed public alarm as to its safety and stability, and satisfied the demands of the city of New Westminster regarding its domestic water supply, and will assist the company in carrying to completion what will be one of the most noted engineering structures on the continent. Mr. Stronach, as resident inspecting engineer, representing the department and Mr. Freeman, has been in continuous attendance at the dam, with the exception of a short period from November 1. 1911, to January 1, 1912, when he was relieved by Mr. M. C. Hendry, B.A.Sc. In addition to his duties as inspecting engineer of the dam, Mr. Stronach has acted as sanitary inspector of the whole Coquitlam Reserve.

MINNEWANKA DAM.

The Calgary Power Company, Limited, has found that the market served by its Horseshoe falls hydro-electric power plant demands an increased power supply greater than is available from the unregulated low water flowage of the Bow river. Conservation of this river's flood waters in storage basins has been imperative in the interest of this company for some time. The comprehensive investigations of this branch in respect to storage and power possibilities of the Bow river show that storage is essential to the proper utilization of the water for power purposes, and that storage can be easily and conveniently provided at several sites on its upper reaches. Lake Minnewanka offered the best and cheapest location for securing immediate storage, and as it was particularly urgent that the company should have the necessary works completed in time to store the flood flow of this season, the department authorized it to construct a storage dam at the outlet of Lake Minnewanka. This dam will allow for the storage of 44,000 acre feet of water and will ensure an average flow throughout the year at the company's Horseshoe falls plant of 1,000 second feet. The location of the lake and of the dam being within the Rocky Mountains Park, and frequented by tourists visiting Banff, the whole situation was placed before the Dominion Parks Branch, to ensure that the company's plans would be carried out without marring the natural beauties of the vicinity or the attractiveness of the park. Upon consideration of the whole matter by the Parks Branch and this branch, it was decided, on the advice of Mr. C. H. Mitchell, consulting engineer to the department, to incorporate in the dam an intake for a future small hydro-electric plant, to be operative for park purposes. In this connection the department is retaining the right to draw from the lake at all seasons 150 second feet of water.

Work has been proceeding at the dam site since the middle of February, and already a considerable portion of the preliminary work has been completed. The unwatering of the foundation is at present being rapidly carried out, and should no unexpected trouble arise the dam will be satisfactorily completed in time to store this season's flood flow. M. C. Hendry, B.A.Sc., an engineer of this Branch, is now on the ground looking after the interests of both the Dominion Parks Branch and the Water-Power Branch.

SMALL WATER-POWERS.

Many applications for the right to develop small powers of less capacity than 150 H.P. have been placed before the department. These applications are in many cases made by homesteaders, with the intention of putting in a water wheel on a small stream flowing through or near their homesteads; others are from men wishing to establish small flour or lumber mills on land held in fee. In the summer of 1911 Mr. B. E. Norrish, an engineer of this branch, made an inspection of some thirteen applications in connection with small power projects before the department, and as a result of his investigations it has been recommended that the Water Power Regulations be amended to provide simple, general means of authorizing these schemes, by the issue of a lease and license, as may be required, on such terms as may be considered necessary in each particular case.

HYDROGRAPHIC SURVEYS.

RAILWAY BELT, B.C.

In April, 1911, a hydrographic survey of the railway belt of British Columbia was inaugurated, with Mr. P. A. Carson, B.A., D.L.S., in direct charge, with a staff of three young graduates of the School of Practical Science, of the University of Toronto.

The objects of the survey were: (1) To investigate the complex water rights situation on the ground; (2) To suggest a practicable and efficient form of administration; (3) To study the water supply of all streams and the water resources of the railway belt; (4) To investigate storage possibilities with a view to conserving the limited water supply; (5) To make surveys necessary to the proper use and conservation of the said water resources; and, (6) To report on the various irrigation and reclamation projects before the department.

In the study of the available water supply and the investigation of water resources, it was decided to follow as far as practicable the methods of the United States Hydrographic Survey, whose work, during the past decade, has proved so valuable, particularly to the western states of the American Union. The current meter and other instruments and equipment, and the field and office methods of the United States Hydrographic Survey have been adopted almost to the minutest detail, and in order that the greatest efficiency should be attained, one of the expert hydrographers of the United States Survey, viz., Mr. R. C. Adams, was borrowed from Washington for a period of three months. Under Mr. Adams' direction a large number of gauging stations were established on the principal contentious streams of the arid portion of the railway belt. Discharge measurements by current meter were taken at different stages of the flow, and systematic gaugings commenced. From these data were deduced the daily, monthly, seasonal, maximum and minimum discharge of the various streams.

This information regarding the available water supply is essential to the satisfactory administration of water rights, and when published will be of inestimable value to the general public interested in irrigation, water-power, municipal water supply and the domestic use of water.

The hydrographic survey was commenced early in May, 1911, with an office at Kamloops, and during the summer the work was confined almost entirely to the irrigation district of the dry portion of the railway belt, owing to the exigencies of the water rights situation. About seventy-five gauging stations were established in the first four months. After the irrigation season had closed, the work was extended to the coast district, from Lytton to New Westminster, and to the mountain district east of Sicamous, about twenty-five more gauging stations being established. Systematic studies of the streams which offer water-power possibilities were commenced, with a view to placing before the government and the public a reliable inventory of the developed and undeveloped water-powers in the railway belt. Studies of the run-off, &c., were also begun of the main waterways, such as the Fraser, Thompson and Columbia rivers, and their larger tributaries.

During the winter a start was made on a number of the larger streams, to study the flow under winter conditions. In the railway belt severe winter conditions are met only between Revelstoke and the summit of the Rockies, but the winter flow is important in that district, being the governing factor in the power possibilities of its many streams.

During May, June, July and August, Messrs. Carlyle, Cline and Richardson investigated water rights in the dry portion of the railway belt, tracing old records and making list of same; reporting on the water supply in each locality; whether the water was being beneficially used; inspecting ditches, flumes and other irrigation works; making a rough survey of the acreage of irrigable and cultivated land owned by each record holder; and so on. As well, these assistant engineers established gauging stations on nearly all the important and contentious streams in the arid portion of the belt, and made current meter measurements of the flow at various stages.

During September and October, Mr. Richardson extended the hydrographic work as far east as Revelstoke and Golden, establishing gauges and making meterings. From Salmon Arm to Golden, the climate is humid, and very little water is used for irrigation. In this district power, navigation, lumbering and municipal water supply are important uses of water.

In October Messrs. Cline and Smith extended the work from Lytton to New Westminster, and investigated most of the important developed and undeveloped power streams in the coast district, establishing gauging stations where advisable.

Mr. A. T. Milner acted as stenographer and clerical assistant in the office at Kamloops. He was transferred on January 29, 1912, to Coquitlam dam, as clerical assistant to R. S. Stronach, Departmental Resident Engineer on the Coquitlam dam of the Vancouver Power Company.

As Chief Engineer, Mr. Carson superintended the inauguration of the Hydrographic survey, and as well inspected and reported upon all applications for irrigation lands within the railway belt, reclamation schemes, foreshore rights, and all matters relating to water and water rights.

On November 1 Mr. Carson was called to Ottawa regarding the proposed transfer of administrative authority over water and water rights, from the Dominion to the Provincial Government. He returned to Kamloops on January 12. During his absence in the east the survey staff at Kamloops was engaged in compiling field data gathered during the season, making discharge curves, computing daily discharges, &c. Some studies of winter flow under ice cover were also made on the larger rivers.

A comprehensive hydrographic report of the operations of the railway belt hydrographic survey for the years 1911 and 1912 is now in course of compilation. It will include a gazetteer of all streams, rivers, lakes, and other watercourses in the railway belt, giving their authoritative and local names; their location; estimates of their runoff, &c.; the present and possible uses of the water; and so forth. Hydrographic data will also be published giving the daily, monthly, yearly, maximum and minimum discharges of about one hundred of the most important streams in the belt, including the contentious irrigation creeks of the dry belt, the larger arteries, such as the Fraser, Thompson, and Columbia rivers, and many important power streams, viz.: Adams river, Kicking Horse river, Illecillewaet river, Spillimacheen river, Shuswap river, Bonaparte river, Nicola river, Nahatatch river, Anderson river, Coquihalla river, Chehalis river, Lillooet river, Chilliwack river, Jones lake, Stave river, Mesliloet river, &c. In addition the report will contain notes on precipitation, evaporation, conservation by storage, flood prevention, drainage, and like topics pertinent to the administration of water and the present and future study of its manifold uses.

PROVINCE OF MANITOBA.

In the spring of 1912 it was decided to extend the hydrographic survey investigations of southeastern Manitoba, commenced by Mr. McLean in connection with his investigations of the power and storage possibilities of the Winnipeg river system, to cover all the province. Permanent office accommodation was obtained in the Chamber of Commerce Block, Winnipeg, and a small staff, consisting of S. S. Scovil. B.Sc., G. H. Burnham, B.A.Sc., and A Perie, clerical assistant, was appointed to commence the work. Apart from the Winnipeg river situation very little has been accomplished except the securing of the necessary outfit and supplies, and the collating of all known existing hydrographic data of the province.

WATER POWER AND STORAGE INVESTIGATIONS.

WINNIPEG RIVER.

The Winnipeg river is naturally a remarkably well-regulated river, its flowage varying in average years only from 13,000 second feet to 45,000 second feet. Within the province of Manitoba it falls 265 feet, of which 224 feet can be concentrated at seven possible power sites, and some 243,300 24-hour H.P., of theoretic energy, developed. With storage, easily and cheaply obtainable in its upper waters, this amount of theoretic horse-power can be more than doubled. The possibility of an ultimate development of 583,500 H.P., within a radius of seventy-five miles of the city of Winnipeg, to supply the future manufacturing requirements of that rapidly growing city, is of great moment to the future development of the west, and particularly to the province of Manitoba.

Recognizing the importance of having the power possibilities of this river developed systematically rather than at random, the Water-Power Branch is carrying on an extensive power survey of the Winnipeg river in Manitoba, and its upper waters in Ontario, with the object of ascertaining its power resources and with especial attention to the most efficient method of concentrating the fall of the river for power, having in mind at the same time the canalization of the river. In view of the important questions involved the services of both Mr. J. R. Freeman and Mr. J. B. McRae, Consulting Engineers, were secured to advise in the organization and scope of the investigations. These two engineers, accompanied by J. T. Johnston and D. L. McLean, made a reconnaissance of the river in August, 1911, from Kenora to Lake Winnipeg, as a result of which a staff of engineers, with Mr. McLean in charge, was organized, equipped, and immediately placed in the field. The work has been progressing very satisfactorily under Mr. McRae's continuous superintendence and will be completed in another year, when the department will be in a position to dictate a development of the river's power resources that will contemplate their maximum possible utilization, having in mind navigation as well as power. If the complete development aimed at is realized navigation could easily be provided from Kenora to Lake Winnipeg merely by the construction of locks in existing power dams, and at comparatively little extra expense.

BOW RIVER POWER AND STORAGE INVESTIGATIONS.

Owing to the increasing demand for power in southwestern Alberta, and the consequent activity of private and municipal enterprises to supply the same by utilizing the waters of the Bow river and its feeders, numerous applications for power and for storage privileges were received by the department, many of which conflicted with each other both in respect to the market which they were to supply and the portion of the river which was to be utilized; many also gave evidence of a very superficial study of the capacity of the site in question and a very scanty knowledge of the detail information required, as well as of the outstanding features necessary for an economical development.

In addition to the various applications and projects before the department, actual construction was practically completed in connection with a power development at the Horseshoe falls on Bow river, by the Calgary Power Company, Limited, in the construction of which defects in the rock foundations beneath the dam had been uncovered. These unforeseen conditions necessitated a revision of the plans of the dam, involving extensive safety measures being provided, the sufficiency of which being a matter of vital interest to the district at large required very careful investigation by the department before being approved.

The situation in the whole district was such that it became imperative that the department should investigate the whole in the field, and thus be competent to lay down a policy of development which would serve the interests of all the district. This course was doubly necessary since the available water-power in this section is not excessive and a careful conservation is needful in order to supply the growing demand.

Early in 1911, Mr. C. H. Mitchell, consulting engineer of Toronto, was retained to advise on an extensive power and storage investigation of the Bow River system, where both power and irrigation have important interests, requiring an exhaustive study of the water resources in order that both may be adequately provided for. Under his direction a comprehensive study of the whole power capacity of the Upper Bow waters, together with its conservation possibilities, was commenced and has since been vigorously prosecuted with Mr. M. C. Hendry, B.A.Sc., as Chief Engineer in the field.

The investigation naturally divided itself into two heads, viz.: the Elbow river and the Bow river, a short resumé of which follows hereafter. As it is the intention of the department to publish in complete form a full and careful analysis of the whole basin as soon as the field work is complete, it has not been considered advisable to go deeply into the subject for the purpose of this report, especially as the field data necessary for the same are not yet completely gathered.

THE ELBOW RIVER.

This river is one of the larger tributaries of the upper Bow, joining the latter at Calgary. Coming as it does from the eastern slopes of the Rocky mountains a considerable portion of its waters originates in the glaciers. The flood period is in the early summer when, in addition to the usual May and June rains, the melting of snow and ice on the mountains by the hot summer sun brings down a large volume of water. The fluctuations are very sudden, and especially is this noticeable in the canyons and contracted portions of the river bed, where from day to day, and even from hour to hour, the water levels change in an extraordinary manner. Sudden and heavy rains, such as occur in mountainous regions in the summer, also tend to cause great fluctuations and to augment those due to temperature.

The gravel covering which overlies the rocky river bed gives rise to a feature of river flow which it is well to consider, and which increases the difficulty of securing an accurate measurement of the actual discharge. A considerable underflow through this gravel is constantly taking place, which is not recorded in the surface flow, except at such places as where the flow takes place through a rock outcrop, or over a rock founded dam; this latter condition would hold at all power developments.

Three conflicting applications for power in the vicinity of the junction of Canyon creek with the Elbow required field investigation, and after a personal visit to the site in May, 1911, by Mr. Mitchell, the necessary field surveys were proceeded with by Mr. Hendry's party. The completion of the field work, taking in all about four weeks, confirmed the opinion formed on inspection, and clearly established the fact that none of the submitted schemes were economically feasible, and consideration of the same was therefore no longer entertained by the department. It was conclusively established that the magnitude of the construction works necessary for the development of any site along the river, considered along with the low minimum flow, rendered any development out of the question unless taken in conjunction with a storage scheme in the upper waters; a feasible scheme involving this feature was investigated and reported upon.

THE BOW RIVER.

The general description of the Elbow river is applicable to the Bow above Calgary. The river offers several excellent power sites, and the applications before the department gave evidence that this fact was appreciated by the public.

The Calgary Power Company's plant at Horseshoe falls, built for transmitting power to Calgary, was placed in operation in May, 1911. There were installed at this time two units of a total capacity of 6,500 horse-power, and the company was even at that time looking around for means to increase its output, in order to meet the insistent growing demand. The source of this increase was naturally storage in the upper waters. Extreme safety precautions over and above those called for in the original design had been incorporated in the dam, due to a poor stratum of rock being exposed during the excavation of the foundations. These measures of safety were recommended by Mr. J. R. Freeman, of Providence, U.S.A., who was retained by the company to advise them when the foundation conditions were exposed, and consisted in part of increasing the section of the dam, provision for draining the body and foundation of the same after construction, thoroughly sealing the doubtful rock strata by drilling the same to a depth of 40 feet and pumping the whole full of cement grout under pressure, and by various other minor devices. A careful inspection of the plant on May 3 and 12 and July 4, gave evidence that the whole plant had been designed and built in a most careful and permanent manner, but since certain of the safety measures recommended to the Company by Mr. Freeman had not yet been completed it was decided to withhold the departmental approval of the whole until such time as these measures were completed or were shown by inspection of the plant after a year's operation to be unnecessary.

The vital points requiring hasty action on the part of the department in addition to the foregoing were in connection with the Kananaskis falls, and the storage possibilities of the upper waters, and on this basis the field investigations for the season were planned. These consisted in a thorough reconnaissance in the earlier part of the season of the power reach of the Bow river from Radnor to Kananaskis falls, and of the upper waters, more especially Kananaskis lakes, Spray lakes, Bow and Hector lakes and Lake Minnewanka. The purpose of this reconnaissance was to lay out a comprehensive plan of attack for the field parties, and to determine with as little delay as possible what storage capacities existed which were worthy of detailed investigation. At the close of the season the most pressing features of these two questions had been dealt with in the field and all the needful surveys made and the data gathered.

The Kananaskis power site has been completely surveyed and the most efficient method of development determined. The best and most easily developed natural storage basin of the upper waters was found in Lake Minnewanka, and the necessary surveys were completed before the closing of the season.

POWER IN SOUTHERN SASKATCHEWAN.

Reconnaissance surveys to date show that it is questionable whether an economic development of water-power can be made in the southern portion of the province of Saskatchewan. As power is essential to the progress and development of the many cities and towns in this province the department should fully investigate other sources of power than water-power. This applies particularly to Swift Current, Moosejaw, Regina, Broadview, and their respective districts.

In southeastern Saskatchewan there are several collieries in the Estevan district (125 miles from Regina) shipping coal in considerable quantities. Some of these lignites have been tested by the Dominion Department of Mines, and found to give fair results for steam raising and excellent results for making producer gas. Similar coals exist 150 miles further west at Wood Mountain, about 80 miles from Moosejaw. Coal has also been located at Rouleau, about 25 miles from Regina, and it is stated to exist within ten miles from that place. There is also coal at Maple creek, and mines have been opened at Swift Current and at Cypress Hills.

In Western Saskatchewan there are very extensive coal fields between the North and South Saskatchewan rivers, and in particular seams at Brock and Eagle Hills, and 90 miles from Battleford and Saskatchewan.

The coal field in southern Saskatchewan is an extension of the North Dakota field. The United States Bureau of Mines states that these lignites used in gas producers develop as much power as the best West Virginia bituminous coals burnt under steam boilers.

There is every reason to believe that power can be produced at the coal mines and distributed over a wide area to towns now without cheap power, at rates that will compare favourably with any but the best water-powers.

Natural gas has been found at Maple creek (100 miles west of Swift Current) where a flow was struck with good pressure at 1,200 feet, and a company has been formed to bore at Swift Current.

It is the intention of the Branch to thoroughly investigate the power situation in this district in all its phases during the coming season.

FORESHORE.

Prior to December, 1910, the administration of foreshore lands was carried on under the jurisdiction of the Department of Marine and Fisheries. At that time the Deputy Minister of Justice ruled that the administration of foreshore lands other than those in public harbours was one properly belonging to the Department of the Interior. Following this decision the foreshore matters were dealt with by the Land Patents Branch, the British Columbia Lands Branch, and by the Water-Power Branch. Finally, however, all foreshore matters were handed over to the Power Branch to deal with, and a complete study of the whole situation is being made, with a view to recommending some definite policy for administering all Dominion land under water.

RECLAMATION INVESTIGATIONS.

In view of the rapid opening up of the country in the vicinity of The Pas, Manitoba, due to the prospective early construction of the Hudson Bay railway, it was considered advisable to carefully investigate the possibility of reclamation of the low lying and, at times, submerged lands in that district. To this end Mr. William Ogilvie, D.L.S., was placed in charge of a field party, with instructions to explore fully the whole extent of the low lands in this district, and to investigate any feasible method of reclamation.

The result of these investigations showed that enormous stretches of territory were subject to overflow from the Saskatchewan river during periods of high water. The river in the vicinity of The Pas flows through a flat alluvial territory, with a drop of only 64 feet in 200 miles, or 3·12 feet per mile. The current is as a result extremely sluggish, and the flood waters during the season of high flow can only be accommodated by submerging large sections of the country. As is the case with other rivers flowing under similar conditions, the immediate banks, though of themselves low, are yet higher than the country to the rear, the banks having been gradually built up by the deposition of the heavier portions of the material carried in suspension during flood periods. A result of these conditions is a frequent breaking of the banks, and a cutting of entirely new channels, carrying sometimes the partial, and sometimes the entire flow of the river. New channels of this description have been formed frequently in the past and are in process of formation at present. Any means of retaining the river in its bed, and of reclaiming the great stretches of affected land, is most desirable for the general development of the district.

Upon completion of his explorations and studies of the river, Mr. Ogilvie reached the conclusion that it might be feasible to lower the surface level of Cedar lake by about 15 feet, the body of water into which the portion of the Saskatchewan river under consideration discharges. This would undoubtedly have the immediate effect of draining a great extent of what is now partially submerged land in the vicinity of the lake, and would also increase the current and consequently deepen the bed of the river for a considerable distance upstream, and as a result reclaim great stretches of land along the shores.

The whole question being of such great importance to the development of that district, arrangements are being made to further study the problem, giving especial attention to the means and cost of lowering Cedar lake the proposed 15 feet and the immediate effect of such lowering on the surrounding lands. This will be proceeded with during the coming season.

I have the honour to be, sir,

Your obedient servant,

J. B. CHALLIES,

Superintendent.

c

PART II

IMMIGRATION

IMMIGRATION

REPORT OF THE SUPERINTENDENT OF IMMIGRATION.

Department of the Interior,
Ottawa, May 1, 1912.

W. W. Cory, Esq., C.M.G.,
Deputy Minister of the Interior,
Ottawa, Ont.

Sir,—I herewith transmit the annual reports on immigration.

The following tables have been compiled in my office:—

IMMIGRANT ARRIVALS.

Summary for the Fiscal Year 1911-12.

Per ocean travel:—			
Quebec		125,950	
Halifax		34,874	
St. John		25,772	
Victoria		5,389	
North Sydney		2,845	
Vancouver		2,216	
New York	14,244		
Portland	6,853		
Boston	1,932		
Philadelphia	371		
Baltimore	81	23,481	220,527
From the United States			133,710
Total			354,237

COMPARATIVE STATEMENT.

Immigration to Canada, via ocean ports, by months, for the Fiscal Year 1911-12, compared with that of the Fiscal Year 1910-11.

—	1910–11.				1911–12.			
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.
April	19,420	4,811	3,588	27,819	24,880	6,324	4,079	35,283
May	20,856	7,329	5,210	33,395	27,427	11,223	7,410	46,060
June	13,437	6,020	4,182	23,689	14,005	8,266	5,702	27,973
July	8,630	4,363	3,026	16,019	8,973	5,478	4,158	18,609
August	7,258	4,201	2,828	14,287	5,885	4,220	2,991	13,096
September	6,540	4,373	2,865	13,778	6,968	6,289	4,336	17,593
October	6,017	4,491	3,084	13,592	5,033	5,102	3,511	13,646
November	3,813	2,512	1,764	8,089	3,588	2,569	1,789	7,946
December	2,553	1,373	980	4,906	2,500	1,470	975	4,945
January	1,960	753	433	3,146	2,202	1,041	605	3,848
February	3,492	1,486	838	5,816	3,267	1,379	743	5,389
March	17,350	4,703	3,094	25,147	18,882	4,534	2,723	26,139
Totals	111,326	46,415	31,892	189,633	123,610	57,895	39,022	220,527

COMPARATIVE STATEMENT.

IMMIGRATION from the United States to Canada, by months, for the Fiscal Year 1911-12, compared with that of the Fiscal Year 1910-11.

—	1910-11.				1911-12.			
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.
April.......... .	11,924	3,951	4,488	20.363	10,621	3,015	2,761	16.397
May...... .	8,508	2,938	2,748	14,194	10,103	2,733	2,534	15,370
June.......... .	6,275	2,486	2,182	10,943	7,736	2,367	1,932	12,035
July............	5,464	2,046	1,689	9,199	7,442	2,106	1,464	11,012
August..........	6,974	1,886	1,630	10,490	12,807	2,317	1,895	17,019
September......	6,880	1,780	1,596	10,256	7,884	1,981	1,619	11,484
October.........	6,123	1,863	1,815	9,801	6,335	2,130	1,791	10,256
November.......	4,167	1,632	1,408	7,207	4,832	1,723	1,558	8,113
December..	2,934	1,268	1,047	5,249	3,176	1,420	1,083	5,679
January........	2,576	1,013	726	4,315	2,663	1,059	619	4,341
February.	3,011	1,098	780	4,889	3,638	1,225	889	5,752
March...........	9,036	2,662	2,847	14,545	10,419	2,951	2,882	16,252
Totals......	73,872	24,623	22,956	121,451	87,656	25,027	21,027	133,710

COMPARATIVE STATEMENT.

TOTAL Immigration for Canada, by months, for the Fiscal Year 1911-12, compared with that of the Fiscal Year 1910-11.

—	1910-11.				1911-12.			
	Males	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.
April...	31,344	8,762	8,076	48,182	35,501	9,339	6,840	51,680
May.......... ..	29,364	10,267	7,958	47,589	37,530	13,956	9,944	61,430
June............	19,712	8,506	6,364	34,582	21,741	10,633	7,634	40,008
July............	14,094	6,409	4,715	25,218	16,415	7,584	5,622	29,621
August..........	14,232	6,087	4,458	24,777	18,692	6,537	4,886	30,115
September......	13,420	6,153	4,461	24,034	14,852	8,270	5,955	29,077
October.........	12,140	6,354	4,899	23,393	11,368	7,232	5,302	23,902
November.......	7,980	4,144	3,172	15,296	8,420	4,292	3,347	16,059
December. .. .	5,487	2,641	2,027	10,155	5,676	2,890	2,058	10,624
January..	4,536	1,766	1,159	7,461	4,865	2,100	1,224	8,189
February.	6,503	2,584	1,618	10,705	6,905	2,604	1,632	11,141
March....... ..	26,386	7,365	5,941	39,692	29,301	7,485	5,605	42,391
Totals.....	185,198	71,038	54,848	311,084	211,266	82,922	60,049	354,237

COMPARATIVE STATEMENT.

TOTAL Immigration, for Canada, by ports, for the Fiscal Year 1911-12, compared with that of the Fiscal Year 1910-11.

—	1910–11.				1911–12.			
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.
Quebec	55,171	30,684	20,766	106,621	58,087	40,227	27,636	125,950
Halifax	22,001	6,627	5,030	33,658	22,896	7,100	4,878	34,874
St. John	13,966	5,039	3,436	22,441	17,602	5,038	3,132	25,772
Victoria	3,175	283	228	3,686	4,620	426	343	5,389
North Sydney	2,032	431	255	2,718	2.203	441	201	2,845
Vancouver	2,351	171	257	2,779	1,845	162	209	2,216
United States ports (New York, Portland Boston, Philadelphia and Baltimore)	12,630	3,180	1,920	17,730	16,357	4,501	2,623	23,481
From the United States	73,872	24,623	22,956	121,451	87,656	25,027	21,027	133,710
Totals	185,198	71,038	54,848	311,084	211.266	82,922	60,049	354,237

SEX, OCCUPATION and Destination of total Immigrant arrivals

	Sex.				Trade or								
					Farmers or Farm Labourers Class.			General Labourers.			Mechanics.		
	Males.	Females.	Children.	Totals	Males.	Females.	Children.	Males.	Females.	Children.	Males.	Females.	Children.
Via ocean ports.	123,610	57,895	39,022	220,527	49,095	10,917	12,816	41,894	9,919	9,939	11,885	6,190	6,058
From United States.	87,656	25,027	21,027	133,710	37,142	10,774	11,644	34,618	5,678	4,481	8,101	1,528	1,166
Totals.	211,266	82,922	60,049	354,237	86,237	21,691	24,460	76,512	15,597	14,420	19,986	7,718	7,224

for Canada, for the Fiscal Year ended March 31, 1912.

Occupation.										Destination.							
Clerks, Traders, &c.			Miners.			Female servants.	Not Classified.			Maritime Provinces.	Quebec.	Ontario.	Manitoba.	Saskatchewan.	Alberta.	British Columbia.	Yukon.
Males.	Females.	Chidren.	Males..	Females.	Children.		Males.	Females.	Children.								
9,560	2655	1943	2482	763	1103	18,390	8,694	9,061	7,163	9,633	34,876	78,853	32,663	18,145	17,386	28,958	13
2,242	814	378	2368	188	160	2,300	3,185	3,745	3,198	6,340	15,726	21,374	10,814	28,013	28,571	22,871	1
11,802	3469	2321	4850	951	1263	20,690	11,879	12,806	10,361	15,973	50,602	100227	43.477	46,158	45,957	51,829	14

COMPARATIVE STATEMENT.

TOTAL Immigration to Canada, by Nationalities, for the Fiscal Year 1911-12, compared with that of the Fiscal Year 1910-11, showing increase or decrease of each Nationality.

——	1910–11.	1911-12.	Increase.	Decrease.
English	84,707	95,107	10,400	
Welsh	1,505	1,699	194	
Scotch	29,924	32,988	3,064	
Irish	6,877	8,327	1,450	
Total British	123,013	138,121	15,108	
African, South	86	144	58	
Australian	266	184		82
Austrian, N.E.S	✓7,891	4,871		3,020
Bohemian	107	143	36	
Bukowinian	700	328		372
Croatian	121	281	160	
Dalmatian	24	38	14	
Galician	3,553	1,594		1,959
Hungarian, N.E.S	756	482		274
Magyar	142	400	258	
Ruthenian	2,869	13,346	10,477	
Slovak	122	168	46	
Belgian	1,563	1,601	38	
Bulgarian	1,068	3,295	2,227	
Brazilian	13			13
Chinese	5,278	6,247	969	
Dutch	931	1,077	146	
French	2,041	2,094	53	
German, N.E.S	2,530	4,645	2,115	
Alsatian		1	1	
Bavarian	2	4	2	
Prussian	1	14	13	
West Indian	398	314		84
Bermudian	10	9		1
Jamaican	47	70	23	
Greek	777	693		84
Hebrew, N.E.S	606	537		69
" Russian	4,188	4,460	272	
" Polish	85	52		33
" Austrian	248	269	21	
" German	19	4		15
Italian	8,359	7,590		769
Japanese	437	765	328	
Newfoundland	2,229	2,598	369	
New Zealand	116	61		55
Portuguese	13	6		7
Polish, N.E.S	269	642	373	
" Austrian	1,065	2,773	1,708	
" German	43	21		22
" Russian	800	1,624	824	
Persian	19	19		
Roumanian	511	793	282	
Russian, N.E.S	6,621	9,805	3,184	
Finnish	2,132	1,646		486
Doukhobor	41	24		17
Spanish	197	191		6
Swiss	270	230		40
Servian	50	209	159	
Danish	535	628	93	
Icelandic	250	205		45
Swedish	3,213	2,394		819
Norwegian	2,169	1,692		477
Turkish, N.E.S	469	632	163	
Armenian	20	60	40	
Egyptian	3			3
Syrian	124	144	20	

Total Immigration by Nationalities, &c.—*Concluded.*

——	1910-11.	1911-12.	Increase.	Decrease.
Arabian	3	2	....	1
U. S. A. citizens, via ocean ports	203	143	....	60
Negro	12	138	126	....
Hindoo	5	3	....	2
Mexican	....	3	3	....
Total Continental, &c	66,620	82,406	15,786	....
From the United States	121,451	133,710	12,259	....
Total Immigration	311,084	354,237	43,153	....

N.E.S.—Not elsewhere specified.

ARRIVALS AT OCEAN PORTS.

For the fiscal year 1911-12, there arrived via Canadian and United States ocean ports 314,150 passengers, of whom 23,241 travelled saloon and 290,909 steerage. Of the saloon passengers 19,704 were destined to Canada and 3,537 to the United States. Of the steerage passengers 266,469 were for Canada and 24,440 for the United States. Included in the steerage passengers for Canada were 38,711 returned Canadians and 7,231 tourists, leaving the immigration proper via ocean ports at 220,527 souls, which together with the 133,710 settlers from the United States, brings the total immigration to 354,237, an increase over the preceding fiscal year of 43,153 persons.

The following further statistical information will be of interest: Table I deals with the total arrivals of saloon passengers; Table II with the total arrivals of steerage passengers; Table III with the monthly arrivals of immigrants for Canada; and Tables IV and V give summaries of the information obtained from immigrants for Canada upon arrival.

TABLE I.

NATIONALITY and Sex of Saloon Passengers arriving at Ocean Ports for the Fiscal Year ended March 31, 1912.

—	Canada.				United States.				Canada and United States.			
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.
African, South	2	3	1	6	....	...	......	.....	2	3	1	6
Australian	14	6	1	21	3	2	......	5	17	8	1	26
Austrian, N.E.S	8	3	......	11	2	2	......	4	10	5	....	15
Bohemian	1	......	......	1	......	......	......	......	1	......	......	1
Croatian	2	3	......	5	......	......	......	......	2	3	......	5
Magyar	1	......	......	1	......	......	......	......	1	......	......	1
Belgian	21	10	1	32	..	1	.....	1	21	11	1	33
Chinese	2	3	4	9	......	......	......	......	2	3	4	9
Dutch	14	3	1	18	2	2	.....	4	16	5	1	22
French	137	83	22	242	25	24	6	55	162	107	28	297
German	64	35	2	101	21	10	1	32	85	45	3	133
English	1,331	735	157	2,223	161	102	14	277	1,492	837	171	2,500
Welsh	23	6	......	29	1	......	......	1	24	6	......	30
Scotch	440	203	30	673	47	46	5	98	487	249	35	771
Irish	139	47	8	194	16	15	1	32	155	62	9	226
West Indian	22	21	8	51	1	......	......	1	23	21	8	52
Bermudian	4	4	......	8	......	......	......	......	4	4	......	8
Jamaican	4	4	......	8	......	......	......	......	4	4	......	8
Greek	14	6	3	23	1	......	......	1	15	6	3	24
Hebrew, N.E.S	2	2	......	4	1	......	......	1	3	2	......	5
" Russian	2	1	1	4	......	......	......	......	2	1	1	4
Italian	35	16	8	59	5	2	......	7	40	18	8	66
Japanese	8	1	3	12	......	......	......	......	8	1	3	12
Newfoundland	258	237	60	555	116	136	8	260	374	373	68	815
New Zealand	5	3	4	12	......	......	......	......	5	3	4	12
Portuguese	1	1	......	2	1	......	......	1	2	1	......	3
Polish, N.E.S	1	......	......	1	......	......	......	......	1	......	......	1
" Russian	1	......	......	1	1	......	......	1	2	......	......	2
Persian	......	......	......	......	1	......	......	1	1	......	......	1
Roumanian	1	2	......	3	......	......	......	......	1	2	......	3
Russian	13	2	2	17	1	1	......	2	14	3	2	19
Spanish	2	......	......	2	3	......	......	3	5	......	......	5
Swiss	8	5	......	13	3	1	......	4	11	6	......	17
Danish	6	1	......	7	1	2	......	3	7	3	......	10
Icelandic	1	......	......	1	......	......	......	......	1	......	......	1
Swedish	3	3	......	6	4	4	......	8	7	7	......	14
Norwegian	12	4	3	19	3	......	......	3	15	4	3	22
Syrian	4	......	......	4	1	......	......	1	5	......	......	5
U.S.A. Citizens	93	79	18	190	998	1,018	85	2,101	1,091	1,097	103	2,291
Negro	......	3	......	3	1	......	......	1	1	3	......	4
Returned Canadian	5,014	3,428	580	9,022	......	......	......	......	5,014	3,428	580	9,022
Tourist	3,660	2,181	270	6,111	329	269	31	629	3,989	2,450	301	6,740
Totals	11,373	7,144	1,187	19,704	1,749	1,637	151	3,537	13,122	8,781	1,338	23,241

TABLE II.

NATIONALITY and Sex of Steerage Passengers arriving at Ocean Ports for the Fiscal Year ended March 31, 1912.

—	Canada.				United States.				Canada and United States.			
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.
African, South	26	108	10	144	4	.....	6	10	30	108	16	154
Australian	94	60	30	184	21	22	10	53	115	82	40	237
Austrian, N.E.S	3,588	739	544	4,871	154	92	31	277	3,742	831	575	5,148
Bohemian	54	38	51	143	20	16	23	59	74	54	74	202
Bukowinian	254	46	28	328	1	1	.....	2	255	47	28	330
Croatian	244	29	8	281	48	9	4	61	292	38	12	342
Dalmatian	31	1	6	38	2	.....	.....	2	33	1	6	40
Galician	1,233	214	147	1,594	9	9	2	20	1,242	223	149	1,614
Hungarian, N.E.S	307	108	67	482	139	57	34	230	446	165	101	712
Magyar	218	83	99	400	76	18	6	100	294	101	105	500
Ruthenian	10,039	1,988	1,319	13,346	26	26	14	66	10,065	2,014	1,333	13,412
Slovak	120	32	16	168	45	19	7	71	165	51	23	239
Belgian	947	355	299	1,601	59	22	35	116	1,006	377	334	1,717
Bulgarian	3,252	26	17	3,295	96	1	1	98	3,348	27	18	3,393
Chinese	5,776	80	391	6,247	172	8	4	184	5,948	88	395	6,431
Dutch	572	269	236	1,077	106	66	57	229	678	335	293	1,306
French	1,181	595	318	2,094	31	26	15	72	1,212	621	333	2,166
German, N.E.S.	2,075	1,164	1,406	4,645	279	226	234	739	2,354	1,390	1,640	5,384
Alsatian	1	.....	.....	1	.....	.....	.....	.....	1	.....	.....	1
Bavarian	4	.....	.....	4	.....	.....	.....	.....	4	.....	.....	4
Prussian	5	1	8	14	.....	.....	.....	.....	5	1	8	14
English	45,540	29,557	20,010	95,107	1,689	1,458	862	4,009	47,229	31,015	20,872	99,116
Welsh	978	442	279	1,699	57	31	30	118	1,035	473	309	1,817
Scotch	14,571	11,529	6,888	32,988	472	437	317	1,226	15,043	11,966	7,205	34,214
Irish	4,384	2,838	1,105	8,327	195	122	45	362	4,579	2,960	1,150	8,689
West Indian	193	107	14	314	25	16	5	46	218	123	19	360
Bermudian	3	6	.....	9	.....	.....	.....	.....	3	6	.....	9
Jamaican	34	32	4	70	.....	.....	.....	.....	34	32	4	70
Greek	611	54	28	693	9	.....	.....	9	620	54	28	702
Hebrew, N.E.S	205	150	182	537	42	58	45	145	247	208	227	682
" Russian	1,650	1,425	1,385	4,460	471	529	574	1,574	2,121	1,954	1,959	6,034
" Polish	25	8	19	52	.....	2	1	3	25	10	20	55
" Austrian	96	90	83	269	6	8	5	19	102	98	88	288
" German	2	1	1	4	.....	.....	.....	.....	2	1	1	4
Italian	6,211	799	580	7,590	21	6	3	30	6,232	805	583	7,620
Japanese	322	362	81	765	1	.....	.....	1	323	362	81	766
Newfoundland	2,001	417	180	2,598	678	431	52	1,161	2,679	848	232	3,759
New Zealand	39	16	6	61	5	2	2	9	44	18	8	70
Portuguese	6	.....	.....	6	1	.....	.....	1	7	.....	.....	7
Polish, N.E.S.	395	139	108	642	27	29	15	71	422	168	123	713
" Austrian	1,870	545	358	2.773	76	94	32	202	1,946	639	390	2,975
" German	15	4	2	21	8	10	11	29	23	14	13	50
" Russian	1,252	232	140	1,624	248	148	64	460	1,500	380	204	2,084
Persian	17	1	1	19	1	1	....	2	18	2	1	21
Roumanian	472	149	172	793	15	14	16	45	487	163	188	838
Russian, N.E.S	7,311	1,172	1,322	9,805	843	376	242	1,461	8,154	1,548	1,564	11,266
Finnish	949	468	229	1,646	642	564	281	1,487	1,591	1,032	510	3,133
Doukhobor	7	3	14	24	.....	.....	.....	.....	7	3	14	24
Spanish	158	21	12	191	3	.....	.....	3	161	21	12	194
Swiss	148	51	31	230	18	11	1	30	166	62	32	260
Servian	185	15	9	209	20	3	1	24	205	18	10	233
Danish	432	130	66	628	266	139	102	507	698	269	168	1,135
Icelandic	83	79	43	205	5	3	1	9	88	82	44	214
Swedish	1,570	479	345	2,394	890	527	272	1,689	2,460	1,006	617	4,083
Norwegian	1,029	428	235	1,692	1,651	840	273	2,764	2,680	1,268	508	4,456
Turkish, N.E.S.	602	21	9	632	33	3	2	38	635	24	11	670
Armenian	53	5	2	60	4	.....	.....	4	57	5	2	64
Egyptian	.....	.....	.....	.....	1	.....	.....	1	1	.....	.....	1
Syrian	70	38	36	144	12	5	3	20	82	43	39	164

NATIONALITY and Sex of Steerage Passengers arriving at Ocean Ports for the Fiscal Year ended March 31, 1912—*Concluded.*

—	Canada.				United States.				Canada and United States.			
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.
Arabian	1	1	.....	2	.....	.....	.....	.....	1	1	.....	2
U. S. A. Citizens	59	51	33	143	1,296	1,628	300	3,224	1,355	1,679	333	3,367
Negro	37	91	10	138	.....	.....	.....	.....	37	91	10	138
Hindoo	2	1	.....	3	1	.....	.....	1	3	1	.....	4
Mexican	1	2	.....	3	.....	.....	.....	.....	1	2	.....	3
Total immigration.	123,610	57,895	39,022	220,527	11,020	8,113	4,040	23,173	134,630	66,008	43,062	243,700
Returned Canadian.	25,128	9,337	4,216	38,711	.....	.....	.....	.....	25,158	9,337	4,216	38,711
Tourist.	5,032	1,888	311	7,231	841	345	81	1,267	5,873	2,233	392	8,498
Totals	153,800	69,120	43,549	266,469	11,861	8,458	4,121	24,440	165,661	77,578	47,670	290,909

TABLE III.

MONTHLY arrivals of Immigrants for Canada, by Nationalities, at Ocean Ports, for the Fiscal Year ended March 31, 1912.

—	Apr.	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Totals.
African, South	106	17	7	4	4	1	4	1	....	....	....	....	144
Australian	35	18	47	5	20	4	13	9	7	6	4	16	184
Austrian, N.E.S.	2,185	926	288	618	282	124	19	17	24	57	15	316	4,871
Bohemian	14	15	20	11	18	15	9	28	....	2	1	10	143
Bukowinian	77	89	11	10	17	18	1	14	4	4	2	81	328
Croatian	44	36	14	4	11	7	28	9	3	10	12	103	281
Dalmatian	4	....	2	....	....	....	....	8	3	....	6	15	38
Galician	818	333	152	92	42	36	6	39	23	15	15	23	1,594
Hungarian, N.E.S.	96	41	7	65	28	11	22	31	12	24	24	121	482
Magyar	39	45	37	11	23	41	15	23	56	46	11	53	400
Ruthenian	2,085	4,298	1,645	587	223	485	471	311	237	247	333	2,424	13,346
Slovak	24	27	11	26	8	4	19	8	2	2	14	32	168
Belgian	271	350	97	105	88	126	99	51	51	35	70	258	1,601
Bulgarian	535	238	50	47	17	20	126	183	300	206	181	1,392	3,295
Chinese	523	844	753	997	519	659	300	779	259	222	122	270	6,247
Dutch	257	204	113	67	77	73	45	35	20	1	19	166	1,077
French	262	481	209	243	126	172	188	92	81	37	113	150	2,094
German, N.E.S.	354	575	889	394	355	386	490	206	217	144	126	509	4,645
Alsatian	....	....	....	....	....	....	....	....	1	....	....	....	1
Bavarian	2	....	....	....	....	....	....	....	....	....	....	2	4
Prussian	....	....	....	....	....	....	1	....	....	....	11	2	14
English	14,704	20,060	12,381	8,158	6,451	9,161	6,566	2,736	1,533	1,078	2,207	10,072	95,107
Welsh	246	377	218	143	85	133	97	41	40	22	29	268	1,699
Scotch	4,562	8,411	5,861	2,739	1,921	2,297	2,396	976	531	292	445	2,557	32,988
Irish	1,028	2,050	1,148	712	602	718	643	277	135	132	141	741	8,327
West Indian	13	62	77	78	49	23	6	....	1	1	....	4	314
Bermudian	3	....	5	....	....	....	....	....	....	....	....	1	9
Jamaican	7	5	6	6	6	9	11	10	....	1	3	6	70
Greek	115	88	93	42	23	29	75	48	31	5	14	130	693
Hebrew, N.E.S.	17	38	96	81	71	53	15	40	42	17	19	48	537
" Russian	232	296	469	617	361	686	281	353	286	329	218	332	4,460
" Polish	....	1	2	17	....	4	....	16	....	10	2	....	52
" Austrian	11	10	19	45	19	46	7	53	19	16	17	7	269
" German	....	....	3	....	....	....	....	....	....	....	....	1	4
Italian	2,119	1,659	527	199	230	230	231	261	264	209	256	1,405	7,590
Japanese	49	96	92	78	71	66	130	48	20	19	30	66	765
Newfoundland	335	547	320	220	249	504	158	120	49	15	9	72	2,598
New Zealand	20	1	16	1	4	1	6	3	2	1	2	4	61
Portuguese	....	....	....	1	2	....	1	....	....	....	2	....	6
Polish, N.E.S.	106	145	144	23	34	17	37	31	11	21	1	72	642
" Austrian	489	483	180	212	55	152	115	98	68	140	214	567	2,773
" German	6	....	7	6	....	....	....	....	1	....	....	1	21
" Russian	214	120	146	82	45	61	77	68	34	56	128	593	1,624
Persian	2	3	....	2	....	6	....	1	....	3	....	2	19
Roumanian	119	153	94	47	71	73	32	50	24	14	8	108	793
Russian, N.E.S.	2,012	1,570	652	981	385	419	415	404	175	254	282	2,256	9,805
Finnish	185	229	219	158	114	159	116	89	122	43	94	118	1,646
Doukhobor	....	15	9	....	....	....	....	....	....	....	....	....	24
Spanish	35	65	3	19	11	7	6	29	9	2	1	4	191
Swiss	24	39	35	33	6	29	17	4	7	3	5	28	230
Servian	7	27	14	4	5	....	37	29	38	7	13	28	209
Danish	85	111	42	56	33	60	27	33	11	5	20	145	628
Icelandic	3	40	35	64	22	17	14	2	4	....	1	3	205
Swedish	482	460	306	239	118	195	113	134	62	31	48	206	2,394
Norwegian	276	298	227	178	113	175	121	56	28	8	34	178	1,692
Turkish	87	24	69	32	17	27	26	59	48	46	49	148	632
Armenian	1	2	1	12	1	2	4	3	17	....	11	6	60
Syrian	2	3	35	21	10	9	5	17	26	9	3	4	144
Arabian	....	....	....	1	....	....	....	....	....	1	....	....	2
U.S.A. Citizens	12	16	25	15	15	25	13	4	2	....	4	12	143
Negro	4	18	45	....	39	18	....	9	5	....	....	....	138
Hindoo	....	1	....	1	....	....	1	....	....	....	....	....	3
Mexican	....	....	....	....	....	....	....	....	....	....	....	3	3
Totals	35,283	46,060	27,973	18,609	13,096	17,593	13,646	7,946	4,945	3,848	5,389	26,139	220,527

TABLE IV

Monthly arrivals of Immigrants for Canada, by Occupation and Destination, at Ocean Ports, for the Fiscal Year ended March 31, 1912.

—	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Totals.
Agriculturists.....	13,009	16,265	9,072	5,933	3,467	3,720	3,020	1,897	1,128	1,013	1,448	12,856	72,828
General labourers.	11,396	12,855	7,410	4,682	3,448	5,126	3,864	2,110	1,725	1,165	1,786	6,185	61,752
Mechanics	2,039	4,765	2,668	1,902	1,972	2,965	2,184	1,005	537	425	642	3,029	24,133
Clerks, traders, &c.	1,565	2,561	1,565	1,642	1,171	1,445	1,098	1,005	394	300	300	1,112	14,158
Miners............	473	785	425	407	333	537	392	241	120	121	141	373	4,348
Female servants...	2,002	3,527	2,838	1,553	1,179	1,897	1,718	833	497	365	523	1,458	18,390
Not classified	4,799	5,302	3,995	2,490	1,526	1,903	1,370	855	544	459	549	1,126	24,918
Totals	35,283	46,060	27,973	18,609	13,096	17,593	13,646	7,946	4,945	3,848	5,389	26,139	220,527
MaritimeProvinces	1,753	1,235	1,050	650	672	1,049	602	558	347	242	292	1,183	9,633
Quebec	4,849	8,205	4,151	2,767	2,130	2,925	2,388	1,398	871	755	865	3,572	34,876
Ontario	12,598	15,835	9,586	6,700	4,756	6,234	5,211	2,650	1,944	1,414	2,166	9,759	78,853
Manitoba....... ..	6,365	7,699	4,126	2,888	1,656	2,216	1,457	846	508	421	598	3,883	32,663
Saskatchewan	2,880	3,486	2,570	1,527	1,092	1,229	998	540	243	243	400	2,937	18,145
Alberta	2,817	3,743	2,432	1,450	974	1,328	928	568	314	264	427	2,201	17,386
British Columbia..	4,021	5,855	4,056	2,626	1,809	2,612	2,062	1,446	718	509	640	2,604	28,958
Yukon..	. ..	2	2	1	7	....	.....	.....	.....	.....	1	.....	13
Totals	35,283	46,060	27,973	18,609	13,096	17,593	13,646	7,946	4,945	3,848	5,389	26,139	220,527

TABLE

NATIONALITY, Sex, Occupation and Destination of Immigrant Arrivals,

—	Sex.				Farmers and Farm Labourers Class.			General Labourers.			TRADE OR Mechanics.		
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Males.	Females.	Children.	Males.	Females.	Children.
African, South....	26	108	10	144	2	....	1	17	....	....	1	....	....
Australian... ...	94	60	30	184	16	5	7	16	3	....	16	1	1
Austrian, N.E.S..	3,588	739	544	4,871	2,176	381	390	1,339	155	105	23	8	9
Bohemian	54	38	51	143	26	13	27	14	7	9	2	1	1
Bukowinian	254	46	28	328	121	15	22	129	9	6	....	1	....
Croatian..........	244	29	8	281	122	4	3	112	6	2	4	....	....
Dalmatian........	31	1	6	38	24	....	....	7	1	6	....	....	....
Galician..........	1,233	214	147	1,594	514	84	109	710	31	24	2	4	6
Hungarian........	307	108	67	482	188	48	43	98	22	20	6	....	....
Magyar	218	83	99	400	137	36	62	59	19	16	7	1	....
Ruthenian........	10,039	1,988	1,319	13,346	6,083	909	971	3,914	259	292	13	14	11
Slovak	120	32	16	168	51	7	7	62	6	7	....	....	....
Belgian	947	355	299	1,601	540	127	132	173	50	42	84	42	43
Bulgarian....	3,252	26	17	3,295	1,082	6	9	2,145	14	6	14	2	1
Chinese......	5,776	80	391	6,247	49	....	....	1,338	6	12	8	....	....
Dutch............	572	269	236	1,077	300	103	130	108	30	32	87	31	30
French	1,181	595	318	2,094	634	181	188	182	45	46	112	42	16
German, N.E.S...	2,075	1,164	1,406	4,645	1,288	636	1,064	309	99	155	191	59	61
Alsatian.	1	....	....	1	....	....	....	....	....	....	....	....	....
Bavarian..........	4	....	....	4	2	....	....	....	....	....	....	....	....
Prussian...... ..	5	1	8	14	2	....	....	....	....	....	....	....	....
English...	45,540	29,557	20,010	95,107	18,845	5,277	5,809	11,218	5,559	5,432	7,122	3,843	3,663
Welsh..........	978	442	279	1,699	416	66	76	181	58	63	136	47	47
Scotch	14,571	11,529	6,888	32,988	5,001	1,171	1,462	3,404	1,600	1,821	2,435	1,263	1,418
Irish.....	4,384	2,838	1,105	8,327	2,024	305	309	1,003	373	309	344	158	119
West Indian......	193	107	14	314	11	....	1	104	3	....	35	3	....
Bermudian.	3	6	....	9	1	....	....	....	....	....	....	....	....
Jamaican.........	34	32	4	70	1	1	....	11	1	....	4	3	....
Greek	611	54	28	693	131	9	3	445	23	10	8	1	....
Hebrew, N.E.S....	205	150	182	537	18	2	4	47	21	29	48	33	37
" Russian..	1,650	1,425	1,385	4,460	92	46	73	409	191	271	536	140	402
" Polish ...	25	8	19	52	1	....	....	2	1	2	4	1	3
" Austrian.	96	90	83	269	9	....	1	26	13	24	21	23	17
" German..	2	1	1	4	....	....	....	....	....	....	1	....	....
Italian	6,211	799	580	7,590	1,395	124	108	4,473	401	333	118	23	12
Japanese..	322	362	81	765	30	21	1	118	87	15	10	6	....
Newfoundland....	2,001	417	180	2,598	2	....	....	1,809	169	83	72	8	17
New Zealand	39	16	6	61	12	2	4	8	....	....	6	1	....
Portuguese	6	....	....	6	....	....	....	5	....	....	....	....	....
Polish, N.E.S. ...	395	139	108	642	183	33	39	177	18	30	6	8	5
" Austrian ..	1,870	545	358	2,773	1,075	173	200	731	87	111	27	4	3
" German ...	15	4	2	21	11	1	1	4	1	1	....	....	....
" Russian....	1,252	232	140	1,624	774	61	46	422	66	56	30	8	7
Persian	17	1	1	19	8	....	1	8	....	....	1	....	....
Roumanian.	472	149	172	793	248	60	107	199	31	39	11	2	3
Russian, N.E.S...	7,311	1,172	1,322	9,805	3,144	646	969	3,955	186	213	98	33	37
Finnish	949	468	229	1,646	234	54	57	604	86	103	32	9	9
Doukhobor	7	3	14	24	7	3	14	....	....	....	....	....	....
Spanish	158	21	12	191	44	....	....	77	4	5	4	....	....
Swiss.......	148	51	31	230	70	16	15	35	1	1	14	4	5
Servian..........	185	15	9	209	52	4	....	131	5	5	1	....	....
Danish..........	432	130	66	628	251	35	41	107	7	6	33	9	2
Icelandic.........	83	79	43	205	48	25	25	12	5	9	9	3	2
Swedish	1,570	479	345	2,394	832	125	184	609	75	95	64	23	26
Norwegian	1,029	428	235	1,692	507	90	94	368	65	80	60	17	28
Turkish....	602	21	9	632	188	3	....	396	7	4	5	2	....
Armenian	53	5	2	60	27	....	....	16	....	....	3	1	2
Syrian	70	38	36	144	29	4	5	13	7	6	7	1	2
Arabian	1	1	....	2	....	....	....	1	....	....	....	....	....
U.S.A. Citizens..	59	51	33	143	17	5	2	12	4	3	7	5	10
Negro............	37	91	10	138	....	....	....	21	2	....	2	1	3
Hindoo	2	1	....	3	....	....	....	1	....	....	....	....	....
Mexican..........	1	2	....	3	....	....	....	....	....	....	1	1	....
Totals.... ...	123,610	57,895	39,022	220,527	49,095	10,917	12,816	41,894	9,919	9,939	11,885	6,190	6,058

V.

for Canada, at Ocean Ports, for the Fiscal Year ended March 31, 1912.

Occupation.										Destination.							
Clerks, Traders, &c.			Miners.			Female Servants.	Not Classified.			Maritime Provinces.	Quebec.	Ontario.	Manitoba.	Saskatchewan.	Alberta.	British Columbia.	Yukon Territory.
Males.	Females.	Children.	Males.	Females.	Children.		Males.	Females.	Children.								
3	1	1	....	....	....	102	3	5	8	3	109	18	2	1	5	6	..
8	7	4	8	2	4	9	30	33	14	3	16	21	6	6	10	122	..
14	4	....	14	8	17	164	22	19	23	207	1,060	1,164	1,442	590	310	98	..
2	....	....	4	4	9	7	6	6	5	18	11	8	18	58	23	7	..
2	....	....	1	....	....	16	1	5	....	6	132	38	64	66	16	6	..
....	....	....	5	1	....	14	1	4	3	1	28	179	13	12	10	38	..
....	....	....	....	....	....	....	....	....	....	....	1	34	3	....	....	....	..
1	....	....	4	1	1	85	2	9	7	39	414	351	566	135	69	20	..
7	....	....	4	....	....	28	4	10	4	15	31	194	86	108	21	27	..
1	....	....	12	....	....	8	2	19	21	35	19	131	88	96	27	4	..
2	2	....	14	6	6	771	13	27	39	220	3,666	2,692	4,215	1,371	1,014	168	..
....	....	....	7	2	2	15	....	2	....	2	8	67	29	3	28	31	..
25	10	4	72	37	47	51	53	38	31	169	431	80	487	174	194	66	..
3	1	....	2	1	1	2	5	....	....	168	799	2,278	22	13	7	8	..
4,193	37	136	....	....	....	2	188	35	243	23	315	355	46	11	17	5,480	..
26	7	4	2	1	3	55	49	42	37	40	125	252	245	115	213	87	..
44	20	5	40	17	16	102	169	188	47	176	907	168	354	200	205	83	1
117	22	17	52	10	28	231	118	107	81	97	384	441	1,125	1,480	977	141	..
....	....	....	....	....	....	....	1	....	....	....	1	....	....	....	....	....	..
1	....	....	....	....	....	....	1	....	....	....	1	....	....	2	1	....	..
1	1	8	1	....	....	....	1	....	....	....	....	....	....	3	1	10	..
2,666	1,448	1,018	1,105	360	475	8,385	4,584	4,685	3,613	3,022	11,716	41,536	11,183	7,875	7,973	11,795	7
54	18	18	108	14	29	169	83	70	46	54	167	449	381	120	237	291	..
1,349	663	441	562	209	350	4,807	1,820	1,816	1,396	1,101	4,093	11,600	5,225	2,217	3,032	5,719	1
529	218	93	45	12	16	1,309	439	463	259	153	1,203	3,516	1,504	481	540	929	1
20	4	1	4	....	....	88	19	9	12	153	75	67	5	1	....	13	..
1	....	....	....	....	....	5	1	1	....	5	....	2	....	....	1	1	..
6	1	....	....	....	....	22	12	4	4	4	10	49	1	1	....	5	..
12	3	5	1	....	....	7	14	11	10	12	236	351	8	1	6	79	..
40	16	25	1	....	....	14	51	64	87	14	254	169	52	18	20	9	1
128	84	103	1	2	1	118	484	544	535	97	1,442	1,777	889	112	95	48	..
5	2	9	....	....	....	....	13	4	5	....	2	41	2	....	....	7	..
13	6	12	....	....	....	9	27	39	29	1	131	109	24	4	....	....	..
....	....	....	....	....	....	....	1	1	1	....	1	2	1	....	....	....	..
32	11	5	129	9	9	107	64	124	113	223	2,684	3,368	211	14	244	846	..
123	13	5	....	....	....	13	41	222	60	....	....	1	....	....	1	753	
7	6	....	45	....	2	131	66	103	78	2,299	109	116	15	....	14	45	..
4	....	....	....	....	....	4	9	9	2	2	6	3	2	....	10	37	1
1	....	....	....	....	....	....	....	....		2	1	....	....	....	....	3	..
....	....	....	26	8	13	51	3	21	21	31	150	136	212	77	29	7	..
2	3	4	21	8	13	236	14	34	27	84	491	610	1,009	275	262	42	..
....	....	....	....	....	....	2	....	....	....	....	....	16	3	1	1	....	..
2	1	....	12	3	4	70	12	23	27	73	388	898	129	68	35	33	..
....	....	....	....	....	....	....	....	1	....	....	1	18	....	....	....	....	..
3	1	1	....	....	....	26	11	29	22	9	355	116	30	245	28	10	..
18	11	7	44	7	6	193	52	96	90	858	1,904	2,460	1,853	1,218	763	749	..
5	4	2	64	20	26	277	10	18	32	2	154	1,173	40	48	71	158	..
....	....	....	....	....	....	....	....	....	....	....	....	....	....	24	....	....	..
4	1	....	22	4	1	6	7	6	6	36	78	54	13	....	....	10	..
8	....	....	1	1	....	22	20	7	10	8	68	43	25	26	43	17	..
1	1	....	....	....	....	4	....	1	4	....	4	181	4	16	1	3	..
13	3	....	4	3	5	59	24	14	12	9	103	114	149	86	110	57	..
1	2	2	....	....	....	33	13	11	5	....	2	....	173	16	....	14	..
11	....	....	27	7	10	228	27	21	30	26	186	490	445	392	353	502	..
10	5	4	16	5	6	223	68	23	23	43	172	210	251	354	352	309	1
8	1	....	....	....	....	3	5	5	5	9	57	558	1	1	....	6	..
6	1	....	....	....	....	....	1	3	....	2	13	42	1	....	....	2	..
16	12	9	....	....	....	6	5	8	14	32	62	37	3	5	3	2	..
....	....	....	....	....	....	....	....	1	....	....	2	....	....	....	....	....	..
6	4	....	....	1	3	17	17	15	15	8	24	42	8	5	13	43	..
4	....	....	2	....	....	84	8	4	7	39	73	25	....	....	....	1	..
1	....	....	....	....	....	....	....	1	....	....	1	....	....	....	1	1	..
....	....	....	....	....	....	....	....	1	....	....	....	3	....	....	....	....	..
9,560	2,655	1,943	2,482	763	1.103	18,390	8,694	9,061	7,163	9,633	34,876	78,853	32,663	18,145	17,386	38,958	13

PORT OF NORTH SYDNEY.

For the fiscal year 1911-12, there arrived at the port of North Sydney 9,663 passengers, of whom 3,512 travelled saloon and 6,151 steerage. Of the saloon passengers 2,499 were destined to Canada and 1,013 to the United States. Of the steerage passengers 4,890 were for Canada and 1,261 for the United States. Included in the steerage passengers for Canada were 1,144 returned Canadians and 901 tourists, leaving the immigration proper at 2,845 souls, an increase as compared with the preceding fiscal year of 127 persons.

Table I deals with the total arrivals of saloon passengers, Table II with the total arrivals of steerage pasesngers, Table III with the monthly arrivals of immigrants for Canada, and Tables IV and V give summaries of the information obtained from immigrants for Canada upon arrival.

TABLE I.

Nationality and Sex of Saloon Passengers arriving at the Port of North Sydney, for the Fiscal Year ended March 31, 1912.

——	Canada.				United States.				Canada and United States.			
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.
Austrian	....	....	....	....	1	....	....	1	1	....	....	1
French	45	40	16	101	18	11	5	34	63	51	21	135
German	....	....	....	....	4	....	....	4	4	....	....	4
English	47	11	1	59	16	....	....	16	63	11	1	75
Welsh	2	....	....	2	....	....	....	....	2	....	....	2
Scotch	12	5	....	17	1	1	....	2	13	6	....	19
Irish	2	1	....	3	4	....	....	4	6	1	....	7
Greek	....	....	....	....	1	....	....	1	1	....	....	1
Italian	1	....	....	1	....	....	....	....	1	....	....	1
Newfoundland	250	228	57	535	114	136	8	258	364	364	65	793
Portuguese	....	....	....	....	1	....	....	1	1	....	....	1
Russian	2	....	....	2	....	....	....	....	2	....	....	2
Spanish	1	....	....	1	....	....	....	....	1	....	....	1
Swiss	....	....	....	....	1	....	....	1	1	....	....	1
Swedish	....	....	....	....	3	....	....	3	3	....	....	3
Norwegian	1	....	....	1	....	....	....	....	1	....	....	1
Syrian	4	....	....	4	1	....	....	1	5	....	....	5
U.S.A. Citizens	13	1	....	14	312	56	6	374	325	57	6	388
Canadian	766	329	43	1,138	....	....	....	....	766	329	43	1,138
Tourist	393	206	22	621	180	125	8	313	573	331	30	934
Totals	1,539	821	139	2,499	657	329	27	1,013	2,196	1,150	166	3,512

TABLE II.

NATIONALITY and Sex of Steerage Passengers arriving at the Port of North Sydney, for the fiscal Year ended March 31, 1912.

	Canada.				United States.				Canada and United States.			
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.
French	60	17	26	103	2	1	.....	3	62	18	26	106
English	21	2	.....	23	13	.....	.....	13	34	2	.....	36
Scotch	4	1	.....	5	1	.....	.....	1	5	1	.....	6
Irish	2	.....	.....	2	1	.....	.....	1	3	.....	.....	3
West Indian	89	5	.....	94	.....	.....	.....	.....	89	5	.....	94
Italian	.....	.....	.....	.....	1	.....	.....	1	1	.....	.....	1
Newfoundland	1,993	413	173	2,579	668	429	51	1,148	2,661	842	224	3,727
Portuguese	2	.....	.....	2	.....	.....	.....	.....	2	.....	.....	21
Russian, N.E.S	.....	.....	.....	.....	1	.....	.....	1	1	.....	.....	1
Finnish	1	.....	.....	1	.....	.....	.....	.....	1	.....	.....	1
Spanish	19	.....	.....	19	.....	.....	.....	.....	19	.....	.....	19
Swiss	.....	.....	.....	.....	1	.....	.....	1	1	.....	.....	1
Swedish	1	.....	.....	1	1	.....	.....	1	2	.....	.....	2
Norwegian	3	.....	.....	3	1	.....	.....	1	4	.....	.....	4
Armenian	1	1	.....	2	.....	.....	.....	.....	1	1	.....	2
Syrian	5	.....	.....	5	1	2	1	4	6	2	1	9
U.S.A. Citizens	2	2	2	6	25	3	7	35	27	5	9	41
Total immigration	2,203	441	201	2,845	716	435	59	1,210	2,919	876	260	4,055
Returned Canadian	863	234	47	1,144	.....	.....	.....	.....	863	234	47	1,144
Tourist	784	112	5	901	20	28	3	51	804	140	8	952
Totals	3,850	787	253	4,890	736	463	62	1,261	4,586	1,250	315	6,151

TABLE III.

MONTHLY Arrivals of Immigrants for Canada, by Nationalities, at the Port of North Sydney, for the Fiscal Year ended March 31, 1912.

—	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Totals
French........	1	8	9	28	3	17	21	11	4	...	....	1	103
English........	1	....	1	7	2	5	3	....	....	1	....	3	23
Scotch.........	1	4	....	....	....	....	....	....	....	...	....	....	5
Irish	....	....	....	2	....	....	....	....	....	....	....	....	2
West Indian...	....	11	49	3	30	....	....	....	1	....	....	....	94
Newfoundland.	335	547	318	219	239	504	158	120	46	15	9	69	2,579
Portuguese	....	..	...	1	....	..	1	....	....	....	....	....	2
Finnish......	....	....	....	...	....	1	....	....	....	....	....	....	1
Spanish	19	....	....	....	..	....	....	....	....	....	....	....	19
Swedish	....	....	....	1	....	....	....	....	....	....	....	....	1
Norwegian....	3	....	....	....	....	....	....	....	...	....	....	....	3
Armenian......	....		....	....	....	....	....	....	2	....	....	....	2
Syrian.........	....	....	3	2	.	....	....	....	....	....	....	....	5
U.S.A. Citizens	....	....	....	6	....	....	....	....	....	....	....		6
Totals...	360	570	380	269	274	527	183	131	53	16	9	73	2,845

TABLE IV.

MONTHLY Arrivals of Immigrants for Canada, by Occupation and Destination, at the Port of North Sydney, for the Fiscal Year ended March 31, 1912.

—	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Totals
Agriculturists....	.....	... .	....	1	... ..	.... .	.. ...	......	2	......	......	....	3
General labourers.	213	525	349	238	187	426	104	69	37	12	8	66	2,234
Mechanics.......	19	6	1	12	26	16	16	17	2	......	. ...	4	119
Clerks, traders &c.	5	4	3	1	3	......	2	1	2	.....	.. ..	....	21
Miners	59	4	.....	...	5	1	......	......	.....	....	....	. ..	69
Female servants.	15	22	12	10	14	31	16	12	4	2	1	3	142
Not classified....	49	9	15	7	39	53	45	32	6	2	. ..	.....	257
Totals.	360	570	380	269	274	527	183	131	53	16	9	73	2,845
Maritime Prov. .	304	526	350	244	242	480	154	111	38	10	5	68	2,532
Quebec.......	15	13	11	5	12	44	15	4	2	2	1	.....	124
Ontario..........	19	27	12	19	8	1	11	9	2	1	. .	3	112
Manitoba.......	2	1	......	.. ..	9	......	1	.....	2	.....	.....	......	15
Saskatchewan....	....	.....	......	......	.....	..	.....	.....	....	......	....	......	.....
Alberta........ .	6	... .	1	......	2	1	.....	5	......	......	... .	2	17
British Columbia.	14	3	6	1	1	1	2	2	9	3	3	....	45
Totals......	360	570	380	269	274	527	183	131	53	16	9	73	2,845

TABLE

Nationality, Sex, Occupation and Destination of Immigrant Arrivals for Canada,

—	Sex.				Trade or								
					Farmers or Farm Labourer Class.			General Labourers.			Mechanics.		
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Males.	Females.	Children.	Males.	Females.	Children.
French	60	17	26	103	......	.....	......	52	6	18	5	......	....
English	21	2	......	23	1	......	......	14	.....	......	4	1	....
Scotch	4	1	......	5	......	......	......	1	......	......	1	1	....
Irish	2	....	......	2	....	......	......	2	......	....	......	......	...
West Indian	89	5	......	94	.....	....	......	73	......	.....	11	......	...
Newfoundland	1,993	413	173	2,579	2	......	......	1,806	168	79	71	8	17
Portuguese	2	......	.....	2	......	......	.....	2	......	....	......	..	....
Finnish	1	......	......	1	......	......	.....	1	.....	......	......	....	....
Spanish	19	......	......	19	......	.....	......	...	...	......	......	....	....
Swedish	1	......	.....	1	.....	...	......	1	.....	......	......	......	...
Norwegian	3	.....	......	3	....	......	......	3	......	......	......	......	....
Armenian	1	1	......	2	......	.....	......	.....	....	......	......	......	....
Syrian	5	......	.....	5	....	.....	......	2	......	....	......	......	....
U.S.A. Citizens	2	2	2	6	.....	......	......	2	2	2	......	......	....
Totals	2,203	441	201	2,845	3	......	..	1,959	176	99	92	10	17

V.

at the Port of North Sydney, for the Fiscal Year ended March 31, 1912.

Occupation.										Destination.						
Clerks, Traders, &c.			Miners.			Female Servants.	Not Classified.			Maritime Provinces.	Quebec.	Ontario.	Manitoba.	Saskatchewan.	Alberta.	British Columbia.
Males.	Females.	Children.	Males.	Females.	Children.		Males.	Females.	Children.							
....	....	....	....	....	....	5	3	6	8	94	9	....	....	....	....	....
1	....	....	....	....	....	1	1	....	....	20	....	....	....	....	3	....
....	....	....	....	....	....	....	2	....	....	2	3	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	2	....	....	....	....	....	....
2	....	....	3	....	....	5	....	....	....	94	....	....	....	....	....	....
7	6	....	45	....	2	131	62	100	75	2,284	109	112	15	....	14	45
....	....	....	....	....	....	....	....	....	....	1	1	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....
....	....	....	19	....	....	....	....	....	....	19	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	3	....	....	....	....	....	....
1	1	....	....	....	....	....	....	....	....	2	....	....	....	....	....	....
3	....	....	....	....	....	....	....	....	....	3	2	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	6	....	....	....	....	....	....
14	7	....	67	....	2	142	68	106	83	2,532	124	112	15	....	17	45

PORT OF HALIFAX.

For the fiscal year 1911-12, there arrived at the port of Halifax 48,397 passengers, of whom 3,216 travelled saloon and 45,181 steerage. Of the saloon passengers, 3,144 were destined to Canada and 72 to the United States. Of the steerage passengers, 41,171 were for Canada and 4,010 for the United States. Included in the steerage passengers for Canada were 5,926 returned Canadians and 371 tourists, leaving the immigration proper at 34,874 souls, an increase as compared with the preceding fiscal year of 1,216 persons.

Table I deals with the total arrivals of saloon passengers, Table II with the total arrivals of steerage passengers, Table III with the monthly arrivals of immigrants for Canada, and Tables IV and V give summaries of the information obtained from immigrants for Canada upon arrival.

TABLE I.

NATIONALITY and Sex of Saloon Passengers arriving at the Port of Halifax, for the Fiscal Year ended March 31, 1912.

—	Canada.				United States.				Canada and United States.			
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.
Australian	2	....	....	2	....	....	....	....	2	....	....	2
Austrian, N.E.S.	2	1	....	3	....	....	....	....	2	1	....	3
Croatian	1	....	....	1	....	....	....	....	1	....	....	1
Belgian	3	....	....	3	....	....	....	....	3	....	....	3
French	5	1	1	7	....	....	....	....	5	1	1	7
German	4	2	....	6	....	1	1	2	4	3	1	8
English	214	82	20	316	9	3	2	14	223	85	22	330
Welsh	2	1	....	3	....	....	....	....	2	1	....	3
Scotch	76	15	3	94	2	1	....	3	78	16	3	97
Irish	39	6	4	49	2	....	....	2	41	6	4	51
West Indian	8	11	4	23	....	....	....	....	8	11	4	23
Bermudian	2	4	....	6	....	....	....	....	2	4	....	6
Jamaican	3	2	....	5	....	....	....	....	3	2	....	5
Hebrew, N.E.S	1	2	....	3	1	....	....	1	2	2	....	4
Italian	....	1	....	1	....	....	....	....	....	1	....	1
Newfoundland	8	9	3	20	2	....	....	2	10	9	3	22
Portuguese	1	....	....	1	....	....	....	....	1	....	....	1
Polish, Russian	1	....	....	1	1	....	....	1	2	....	....	2
Danish	2	1	....	3	....	....	....	....	2	1	....	3
Norwegian	1	....	....	1	....	....	....	....	1	....	....	1
U.S.A. Citizens	6	5	1	12	18	11	7	36	24	16	8	48
Negro	....	2	....	2	....	....	....	....	....	2	....	2
Canadian	627	306	70	1,003	....	....	....	....	627	306	70	1,003
Tourist	929	573	77	1,579	5	5	1	11	934	578	78	1,590
Totals	1,937	1,024	183	3,144	40	21	11	72	1,977	1,045	194	3,216

TABLE II.

NATIONALITY and Sex of Steerage Pasesngers arriving at the Port of Halifax, for the Fiscal Year ended March 31, 1912.

—	Canada.				United States.				Canada and United States.			
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.
African, South	4	1	.....	5	1	.....	.....	1	5	1	.....	6
Australian	6	.....	.....	6	.....	.....	.....	.....	6	.....	.....	6
Austrian, N.E.S	287	79	111	477	48	21	9	78	335	100	120	555
Bohemian	.....	1	2	3	9	6	12	27	9	7	14	30
Bukowinian	9	5	5	19	.....	1	.....	1	9	6	5	20
Croatian	8	.....	.....	8	39	7	4	50	47	7	4	58
Dalmatian	.....	.....	.....	.....	2	.....	.....	2	2	.....	.....	2
Galician	436	64	44	544	.....	1	.....	1	436	65	44	545
Hungarian, N.E.S	19	2	.....	21	124	42	19	185	143	44	19	206
Magyar	14	1	.....	15	75	18	6	99	89	19	6	114
Ruthenian	464	87	58	609	12	19	3	34	476	106	61	643
Slovak	8	1	1	10	39	14	6	59	47	15	7	69
Belgian	159	68	49	276	22	8	19	49	181	76	68	325
Bulgarian	1,253	9	4	1,266	76	1	1	78	1,329	10	5	1,344
Chinese	9	.....	.....	9	.....	.....	.....	.....	9	.....	.....	9
Dutch	139	52	31	222	31	17	10	58	170	69	41	280
French	62	45	22	129	3	5	.....	8	65	50	22	137
German, N.E.S	173	72	71	316	109	81	54	244	282	153	125	560
Bavarian	1	.....	.....	1	.....	.....	.....	.....	1	.....	.....	1
English	10,503	4,003	2,754	17,260	213	107	75	395	10,716	4,110	2,829	17,655
Welsh	295	68	58	421	10	2	1	13	305	70	59	434
Scotch	3,452	1,516	958	5,926	67	40	21	128	3,519	1,556	979	6,054
Irish	756	310	116	1,182	25	6	4	35	781	316	120	1,217
West Indian	36	17	.....	53	21	10	5	36	57	27	5	89
Bermudian	2	1	.....	3	.....	.....	.....	.....	2	1	.....	3
Jamaican	7	11	.....	18	.....	.....	.....	.....	7	11	.....	18
Greek	65	4	3	72	2	.....	.....	2	67	4	3	74
Hebrew, N.E.S	51	27	33	111	19	34	14	67	70	61	47	178
" Russian	359	282	310	951	137	159	156	452	496	441	466	1,403
" Polish	18	4	5	27	.....	2	1	3	18	6	6	30
" Austrian	16	20	13	49	3	2	.....	5	19	22	13	54
Italian	380	8	10	398	7	.....	.....	7	387	8	10	405
Newfoundland	8	3	7	18	10	2	1	13	18	5	8	31
New Zealand	.....	1	.....	1	1	.....	.....	1	1	1	.....	2
Portuguese	1	.....	.....	1	1	.....	.....	1	2	.....	.....	2
Polish, N.E.S	22	5	11	38	3	2	1	6	25	7	12	44
" Austrian	90	26	16	132	31	39	14	84	121	65	30	216
" German	1	.....	.....	1	4	3	2	9	5	3	2	10
" Russian	70	11	8	89	69	14	12	95	139	25	20	184
Persian	2	.....	.....	2	.....	.....	.....	.....	2	.....	.....	2
Roumanian	17	8	10	35	11	7	8	26	28	15	18	61
Russian, N.E.S.	2,812	103	94	3,009	461	75	49	585	3,273	178	143	3,594
Finnish	186	61	19	266	136	68	21	225	322	129	40	491
Spanish	9	5	6	20	2	.....	.....	2	11	5	6	22
Swiss	13	1	.....	14	1	.....	.....	1	14	1	.....	15
Servian	77	.....	.....	77	20	3	1	24	97	3	1	101
Danish	40	8	3	51	38	19	13	70	78	27	16	121
Icelandic	7	1	1	9	1	.....	.....	1	8	1	1	10
Swedish	198	39	22	259	113	48	33	194	311	87	55	453
Norwegian	107	38	15	160	243	71	22	336	350	109	37	496
Turkish, N.E.S	189	3	2	194	17	.....	1	18	206	3	3	212
Armenian	2	.....	.....	2	.....	.....	.....	.....	2	.....	.....	2
Syrian	15	11	2	28	6	3	2	11	21	14	4	39
U.S.A. Citizens	5	.....	.....	5	139	33	5	177	144	33	5	182
Negro	33	17	4	54	.....	.....	.....	.....	33	17	4	54
Mexican	1	1	.....	2	.....	.....	.....	.....	1	1	.....	2
Total immigration	22,896	7,100	4,878	34,874	2,401	990	605	3,996	25,297	8,090	5,483	38,870
Returned Canadian	4,169	1,112	645	5,926	.....	.....	.....	.....	4,169	1,112	645	5,926
Tourist	245	102	24	371	7	4	3	14	252	106	27	385
Totals	27,310	8,314	5,547	41,171	2,408	994	608	4,010	29,718	9,308	6,155	45,181

TABLE III.

MONTHLY Arrivals of Immigrants for Canada, by Nationalities, at the Port of Halifax, for the Fiscal Year ended March 31, 1912.

——	Apr.	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Totals.
African, South	1	....	....	....	2	1	....	1	....	....	....	....	5
Australian	4	....	....	1	....	....	....	....	1	....	....	....	6
Austrian, N.E.S.	160	169	....	8	....	8	....	....	5	17	1	109	477
Bohemian	....	....	....	....	3	....	....	....	....	....	....	....	3
Bukowinian	....	....	3	....	3	11	....	....	2	....	....	....	19
Croatian	....	....	....	....	....	....	....	....	2	....	....	6	8
Galician	382	27	52	....	13	30	....	....	19	2	7	12	544
Hungarian, N.E.S	3	1	1	....	....	....	....	1	6	....	8	1	21
Magyar	....	2	....	....	2	....	....	1	....	8	1	1	15
Ruthenian	....	235	58	81	13	16	41	34	6	21	43	61	609
Slovak	....	....	....	1	....	....	....	....	1	2	3	3	10
Belgian	56	32	11	5	....	....	4	10	26	13	32	87	276
Bulgarian	83	69	9	5	1	8	41	56	171	138	116	569	1,266
Chinese	....	1	....	....	1	....	....	1	....	2	....	4	9
Dutch	76	10	2	....	....	5	....	21	11	1	7	89	222
French	17	4	....	4	....	....	1	14	18	11	17	43	129
German, N.E.S	31	28	17	6	6	7	4	11	66	18	23	99	316
Bavarian	....	....	....	....	....	....	....	....	....	....	....	1	1
English	6,822	1.004	407	93	140	242	172	311	887	641	1,060	5,481	17,260
Welsh	130	24	10	2	3	....	7	2	28	8	16	191	421
Scotch	2,870	374	211	28	50	86	30	160	372	160	221	1,364	5,926
Irish	462	90	62	2	7	6	9	18	58	52	53	363	1,182
West Indian	3	8	....	22	....	11	4	....	....	1	....	4	53
Bermudian	3	....	....	....	....	....	....	....	....	....	....	....	3
Jamaican	3	5	....	2	2	1	1	4	....	....	....	....	18
Greek	15	3	3	7	....	....	2	3	14	4	11	10	72
Hebrew, N.E.S.	11	....	....	4	9	10	4	4	8	12	13	36	111
" Russian	76	42	72	32	46	64	26	80	169	92	88	164	951
" Polish	....	1	....	16	....	....	....	4	....	4	2	....	27
" Austrian	2	2	5	1	4	6	....	7	6	....	12	4	49
Italian	50	224	25	31	....	....	....	2	13	16	13	24	398
Newfoundland	....	....	2	....	10	....	....	....	3	....	....	3	18
New Zealand	....	....	....	....	....	....	....	1	....	....	....	....	1
Portuguese	....	....	....	....	....	....	....	....	....	....	1	....	1
Polish, N.E.S.	8	1	....	2	....	9	....	1	6	4	1	6	38
" Austrian	1	36	6	1	2	....	....	5	10	19	30	22	132
" German	....	....	....	....	....	....	....	....	1	....	....	....	1
" Russian	16	6	9	2	6	2	1	2	4	4	7	30	89
Persian	....	....	....	....	....	....	....	....	....	....	....	2	2
Roumanian	16	7	4	....	4	....	....	....	2	....	1	1	35
Russian, N.E.S.	618	453	75	42	70	95	83	57	76	38	124	1,278	3,009
Finnish	70	3	1	....	....	....	....	....	68	34	35	55	266
Spanish	7	5	....	4	....	....	....	1	3	....	....	....	20
Swiss	8	....	1	....	....	....	....	....	1	....	2	2	14
Servian	3	16	1	....	2	....	....	10	37	....	....	8	77
Danish	7	1	....	....	....	....	....	....	2	3	1	37	51
Icelandic	3	....	....	....	....	....	....	....	3	....	1	2	9
Swedish	147	4	....	....	....	1	....	14	28	13	11	41	259
Norwegian	56	....	....	....	....	....	....	1	21	1	13	68	160
Turkish, N.E.S.	3	....	....	....	....	4	14	25	22	14	6	106	194
Armenian	....	....	....	....	....	....	....	....	2	....	....	....	2
Syrian	....	....	4	....	....	1	1	13	6	1	....	2	28
U.S.A. Citizens	2	....	....	....	....	....	....	....	1	....	....	2	5
Negro	4	18	7	....	12	....	....	8	5	....	....	....	54
Mexican	....	....	....	....	....	....	....	....	....	....	....	2	2
Totals	12,229	2,905	1,058	402	411	624	445	883	2,190	1,354	1,980	10,393	34,874

TABLE IV.

MONTHLY Arrivals of Immigrants for Canada, by Occupation and Destination, at the Port of Halifax, for the Fiscal Year ended March 31, 1912.

—	Apr.	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Totals.
Agriculturists.......	5,006	739	215	66	79	113	46	134	399	252	454	3,800	11,303
General labourers...	2,919	1,339	255	144	112	165	223	328	877	560	669	3,411	11,012
Mechanics..........	899	220	68	46	109	117	54	93	316	166	264	1,511	3,863
Clerks, traders, &c.	485	114	31	10	9	30	5	55	131	73	116	391	1,450
Miners..............	225	113	73	85	70	142	68	77	78	58	62	216	1,267
Female servants.....	719	116	88	21	22	41	26	87	251	134	225	592	2,322
Not classified........	1,976	264	328	30	10	16	13	109	138	111	190	472	3,657
Totals........	12,229	2,905	1,058	402	411	624	445	883	2,190	1,354	1,980	10,393	34,874
Maritime Provinces..	679	458	479	203	272	355	286	299	251	152	190	730	4,354
Quebec.	1,081	535	125	31	20	44	57	92	326	188	245	976	3,720
Ontario	4,794	966	228	98	75	120	52	299	950	658	879	4,048	13,167
Manitoba	2,089	411	99	40	22	67	20	94	234	141	241	1,566	5.024
Saskatchewan......	1,054	144	35	9	10	12	4	26	85	36	154	1,316	2,885
Alberta.	1,043	163	18	17	8	13	16	41	127	79	124	937	2,586
British Columbia....	1,489	228	74	4	4	13	10	32	217	100	147	820	3,138
Totals.......	12,229	2,905	1,058	402	411	624	445	883	2,190	1,354	1,980	10,393	34,874

TABLE

Nationality, Sex, Occupation and Destination of Immigrant Arrivals for

—	Sex.				Trade or								
					Farm or Farmer Labourers Class.			General Labourers.			Mechanics.		
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Males.	Females.	Children.	Males.	Females.	Children.
African, South....	4	1	.....	5	1	.....	....	2	....	.....	.....	.....	....
Australian........	6	....	.....	6	1	.....	.....	1	.....	.....	.....	.....	....
Austrian, N.E.S..	287	79	111	477	70	41	86	209	31	13	.....	....	....
Bohemian	.....	1	2	3	.....	.....	.....		.....	....	.....	.....	....
Bukowinian.......	9	5	5	19	4	1	2	4	2	3	.....	.....	....
Croatian..........	8	.....	.....	8	3	.....	....	5	.....	.....	....	.....	....
Galician.........	436	64	44	544	111	21	34	323	14	4	1	1	5
Hungarian, N.E.S.	19	2	.....	21	10	1	.....	5	.....	.....	2	.....	....
Magyar	14	1	.....	15	8	1	....	2	.....	.....	2	....	....
Ruthenian........	464	87	58	609	125	15	18	338	28	33	.....	2	1
Slovak............	8	1	1	10	.....	.....	.....	8	1	1	.....	.....	....
Belgian....	159	68	49	276	84	21	19	27	10	11	12	5	7
Bulgarian.........	1,253	9	4	1,266	90	2	.....	1,156	3	2	5	2	1
Chinese.	9	.....	.....	9	....	.....	....	7	.....	.....	....	....	..
Dutch......	139	52	31	222	86	23	18	19	7	8	24	5	3
French	62	45	22	129	22	11	13	12	3	1	4	6	....
German, N.E.S...	173	72	71	316	95	37	50	29	9	9	22	5	3
Bavarian..........	1	.....	.....	1	.....	.....	.....	.....	....	....	.....	.....	....
English..... ..	10,503	4,003	2,754	17,260	5,007	998	1,013	2,064	583	578	1,505	422	353
Welsh............	295	68	58	421	153	19	27	43	10	11	45	9	7
Scotch............	3,452	1,516	958	5,926	1,226	200	326	779	188	189	423	101	91
Irish....	756	310	116	1,182	391	42	53	146	21	17	49	11	10
West Indian......	36	17	..	53	1	....	.....	13	3	...	15	.....	....
Bermudian..	2	1	.....	3	.....	.....	.....	.....	.....	.....	.....	.. .	....
Jamaican.........	7	11	....	18	.....	.....	....	4	1	....	1	....	....
Greek.	65	4	3	72	7	1	.....	56	1	1	1	....	....
Hebrew, N.E.S...	51	27	33	111	9	2	4	10	2	1	16	10	18
" Russian..	359	282	310	951	9	6	15	71	33	63	195	162	156
" Polish....	18	4	5	27	.....	.....	.....	2	.....	.....	2	.....	....
" Austrian.	16	20	13	49	1	.....	.....	3	2	1	8	14	9
Italian	380	8	10	398	11	.....	1	350	4	9	4	....	...
Newfoundland....	8	3	7	18	.....	.....	.....	3	1	4	1	.....	....
New Zealand	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	....
Portuguese.......	1	.....	.....	1	....	...	.....	.....	.....	.....	.....	.....	....
Polish, N.E.S.	22	5	11	38	3	.....	.....	6	1	3	1	.....	....
" Austrian..	90	26	16	132	21	6	8	66	8	8	3	.....	....
" German...	1	.....	.....	1	.....	.....	...	1	.....	.....	.....	.....	....
" Russian...	70	11	8	89	13	2	.....	51	1	2	5	2	4
Persian...........	2	.....	.....	2	1	.....	.....	1	.....	.....	.....	.....	....
Roumanian.	17	8	10	35	7	4	7	2	...	.....	3	1	2
Russian, N.E.S...	2,812	103	94	3,009	192	25	44	2,581	45	41	26	5	9
Finnish...........	186	61	19	266	23	8	7	152	11	11	4	.....	....
Spanish	9	5	6	20	2	.....	.....	2	1	.....	1	.....	....
Swiss....... ..	13	1	.....	14	7	.....	.....	4	.....	.....	1	.....	...
Servian.........	77	.....	.....	77	5	....	....	72	.....	.....	.....	.....	....
Danish...........	40	8	3	51	30	3	1	4	1	1	4	.....	....
Icelandic.........	7	1	1	9	2	.....	.....	...	....	.....	4	.. .	1
Swedish.	198	39	22	259	109	15	12	72	6	7	9	1	2
Norwegian........	107	38	15	160	78	4	4	19	3	9	8	3	....
Turkish, N.E.S...	189	3	2	194	5	1	.....	181	2	2	1	.....	....
Armenian	2	.....	.....	2	2	.....	.....	.....	.. ..	.....	.....	.....	..
Syrian.......	15	11	2	28	5	.. ...	.....	4	2	.....	.....	.....	....
U.S.A. Citizens...	5	.....	.....	5	1	.....	.....	.....	....	.....	....	.....	....
Negro.	33	17	4	54	.....	.....	.....	20	2	.....	1	1	3
Mexican	1	1	.....	2	.....	.....	.....	.....	.....	.....	1	1	....
Totals........	22,896	7,100	4,878	34,874	8,031	1,510	1,762	8,929	1,040	1,043	2,409	769	685

V.

Canada, at the Port of Halifax, for the Fiscal Year ended March 31, 1912.

Occupation.										Destination.						
Clerks, Traders, &c.			Miners.			Female servants.	Not Classified.			Maritime Provinces.	Quebec.	Ontario.	Manitoba.	Saskatchewan.	Alberta.	British Columbia.
Males.	Females.	Children.	Males.	Females.	Children.		Males.	Females.	Children.							
....	....	....	....	....	....	1	1	...	....	2	1	1	1	....	....	....
....	....	....	2	....	....	....	2	....	....	1	....	...	1	....	2	2
2	....	....	6	5	12	2	....	....	....	38	75	86	127	110	21	20
....	....	....	....	1	2	....	....	....	....	3	....	....	....	....	....	....
....	....	....	....	....	....	2	1	....	....	1	....	2	7	3	5	1
....	....	....	....	....	....	....	....	....	....	....	2	3	2	....	....	1
....	....	....	1	1	1	25	....	2	....	19	128	113	233	40	11	....
1	....	....	1	....	....	1	....	....	....	1	6	8	4	....	2	....
....	....	....	2	....	....	....	....	....	....	4	....	7	2	2	....	....
1	....	....	....	1	2	38	....	3	4	36	145	120	207	54	47	....
....	....	....	....	....	....	....	....	....	....	....	....	5	2	....	3	....
5	3	1	27	12	11	16	4	1	....	79	35	11	109	23	13	6
....	....	....	2	1	1	1	....	....	....	87	303	872	1	....	1	2
1	....	....	....	....	....	....	1	....	....	1	6	1	1	....	....	....
2	....	....	....	....	....	16	8	1	2	16	4	65	55	29	46	7
2	3	....	11	9	7	5	11	8	1	37	35	12	28	12	1	4
6	2	3	11	5	5	8	10	6	1	62	21	41	110	33	43	6
....	....	....	....	....	....	....	1	....	....	....	1	....	....	....	....	....
467	171	119	357	110	160	1,185	1,103	534	531	2,115	956	7,054	2,177	1,762	1,478	1,718
12	1	....	24	3	3	17	18	9	10	29	20	96	145	24	52	55
308	72	33	194	64	114	650	522	241	205	710	445	1,836	989	461	511	974
91	25	12	17	4	9	169	62	38	15	100	113	452	218	95	107	97
4	....	....	....	....	....	13	3	1	....	30	10	11	1	....	....	1
1	....	....	....	....	....	1	1	....	....	1	...	1	....	....	1	....
....	....	....	....	....	....	9	2	1	....	4	6	8	....	....	....	....
1	1	2	....	....	....	1	....	....	....	5	23	42	....	....	1	1
9	....	....	....	....	....	4	7	9	10	11	37	46	6	5	6	....
28	12	13	....	....	....	16	56	53	63	24	198	567	138	5	18	1
4	....	....	....	....	....	....	10	4	5	....	....	25	2	....	....	....
....	....	....	....	....	....	1	4	3	3	1	13	33	1	1	....	....
4	1	....	10	....	....	3	1	....	....	68	227	73	5	1	....	24
....	....	....	....	....	....	....	4	2	3	15	....	3	....	....	....	....
....	....	....	....	....	....	....	....	1	....	1	....	....	....	....	....	....
1	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....
....	....	....	12	4	8	....	....	....	....	20	10	2	1	5	....	....
....	....	....	....	....	....	12	....	....	....	23	30	16	34	16	13	....
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....
....	....	..	1	1	2	4	....	1	....	12	33	29	11	4	....	....
....	....	....	....	....	....	....	....	....	....	....	....	2	....	....	....	....
2	1	1	....	....	....	....	3	2	....	2	3	12	....	9	....	9
1	1	....	9	1	....	22	3	4	....	703	740	929	285	122	86	144
....	....	....	7	3	1	38	....	1	....	....	41	208	....	2	8	7
....	....	....	3	3	1	....	1	1	5	14	....	4	2	....	....	....
....	....	....	....	....	....	....	1	1	....	2	3	2	7	...	....	....
....	....	....	....	....	....	....	....	....	....	....	1	76	....	....	....	....
....	....	....	....	....	....	4	2	....	1	2	5	13	19	8	4	....
....	....	....	....	....	....	....	1	1	....	....	....	....	9	....	....	....
2	....	....	1	....	....	16	5	1	1	5	24	58	52	22	60	38
....	1	....	....	....	....	25	2	2	2	16	2	11	31	36	46	18
....	....	....	....	....	....	....	2	....	....	....	3	191	....	..	...	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2
6	6	2	...	....	....	3	....	....	....	14	8	5	1	....	....	....
....	....	....	....	....	....	....	4	....	....	....	1	3	....	1	....	....
3	....	....	2	....	...	14	7	....	1	39	6	9	....	....	....	....
....	....	....	...	....	....	....	....	....	....	....	....	2	....	....	....	....
964	300	186	700	228	339	2,322	1,863	931	863	4,354	3,720	13,167	5, 024	2,885	2,586	3,138

PORT OF ST. JOHN.

For the fiscal year 1911-12, there arrived at the port of St. John 33,576 passengers, of whom 1,247 travelled saloon and 32.329 steerage. Of the saloon passengers 1,188 were destined to Canada and 59 to the United States. Of the steerage passengers 30,355 were for Canada and 1,974 for the United States. Included in the steerage passengers for Canada were 4,438 returned Canadians and 145 tourists, leaving the immigration proper at 25,772 souls, an increase as compared with the preceding fiscal year of 3,331 persons.

Table I deals with the total arrivals of saloon passengers; Table II with the total arrivals of steerage passengers; Table III with the monthly arrivals of immigrants for Canada, and Tables IV and V give summaries of the information obtained from immigrants for Canada upon arrival.

TABLE I.

NATIONALITY and Sex of Saloon Passengers arriving at the Port of St. John, for the Fiscal Year ended March 31, 1912.

	CANADA.				UNITED STATES.				CANADA AND UNITED STATES.			
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.
Austrian	2	....	....	2	....	1	....	1	2	1	....	3
Belgian	4	2	....	6	....	....	....	....	4	2	....	6
Dutch	1	....	....	1	1	....	....	1	2	....	....	2
French	3	1	....	4	1	....	....	1	4	1	....	5
German	1	2	....	3	1	....	....	1	2	2	....	4
English	129	61	21	211	5	....	....	5	134	61	21	216
Welsh	3	....	....	3	....	....	....	....	3	....	....	3
Scotch	25	9	1	35	....	....	....	....	25	9	1	35
Irish	9	3	1	13	....	1	1	2	9	4	2	15
West Indian	2	1	....	3	....	....	....	....	2	1	....	3
Bermudian	2	....	....	2	....	....	....	....	2	....	....	2
Jamaican	1	1	....	2	....	....	....	....	1	1	....	2
Italian	1	....	....	1	....	....	....	....	1	....	....	1
New Zealand	1	....	....	1	....	....	....	....	1	....	....	1
Roumanian	1	....	....	1	....	....	....	....	1	....	....	1
Russian	1	....	....	1	....	....	....	....	1	....	....	1
Danish	1	....	....	1	....	....	....	....	1	....	....	1
U. S. A. Citizens	1	....	....	1	11	13	1	25	12	13	1	26
Canadian	354	180	44	578	....	....	....	....	354	180	44	578
Tourist	195	98	26	319	15	6	2	23	210	104	28	342
Total	737	358	93	1,188	34	21	4	59	771	379	97	1,247

TABLE II.

NATIONALITY and Sex of Steerage Passengers arriving at the Port of St. John, for the Fiscal Year ended March 31, 1912.

—	CANADA.				UNITED STATES.				CANADA AND UNITED STATES.			
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.
African, South		1		1						1		1
Australian	3			3					3			3
Austrian, N. E. S	1,750	279	129	2,158	39	13	4	56	1,789	292	133	2,214
Bohemian	4	4	3	11	4	3	6	13	8	7	9	24
Bukowinian	144	13	8	165	1			1	145	13	8	166
Croatian	32			32	5	2		7	37	2		39
Dalmatian	5			5					5			5
Galician	223	37	20	280	5	3		8	228	40	20	288
Hungarian, N. E. S.	80	18	6	104	8	5	7	20	88	23	13	124
Magyar	27	10	5	42					27	10	5	42
Ruthenian	3,480	632	265	4,377	5	1	6	12	3,485	633	271	4,389
Slovak	5	2		7	3	3		6	8	5		13
Belgian	83	31	27	141	12	8	11	31	95	39	38	172
Bulgarian	878	4	4	886	17			17	895	4	4	903
Chinese	55			55					55			55
Dutch	81	22	31	134	12	2	1	15	93	24	32	149
French	188	81	56	325	3	4		7	191	85	56	332
German, N. E. S	213	101	136	450	19	22	31	72	232	123	167	522
Alsatian	1			1					1			1
Bavarian	3			3					3			3
Prussian	4	1	8	13					4	1	8	13
English	4,111	2,006	1,377	7,494	112	82	55	249	4,223	2,088	1,432	7,743
Welsh	90	22	10	122	3	1		4	93	23	10	126
Scotch	1,629	724	421	2,774	27	11	12	50	1,656	735	433	2,824
Irish	471	224	80	775	14	7	1	22	485	231	81	797
West Indian	27	40	1	68	3	5		8	30	45	1	76
Bermudian	1	4		5					1	4		5
Greek	38	3	1	42	1			1	39	3	1	43
Hebrew, N. E. S	16	9	2	27	2	5	3	10	18	14	5	37
" Russian	206	132	129	467	82	64	56	202	288	196	185	669
" Polish	1	2	3	6					1	2	3	6
" Austrian	11	5	4	20	1			1	12	5	4	21
Italian	313	23	13	349	2			2	315	23	13	351
New Zealand	1			1					1			1
Polish, N. E. S.	116	23	16	155	9	9	4	22	125	32	20	177
" Austrian	865	197	112	1,175	22	10	4	36	888	207	116	1,211
" German	1			1		1		1	1	1		2
" Russian	401	42	12	455	81	49	13	143	482	91	25	598
Persian			1	1	1	1		2	1	1	1	3
Roumanian	92	20	18	130		5	7	12	92	25	25	142
Russian, N. E. S	1,109	137	126	1,372	69	40	18	127	1,178	177	144	1,499
Finnish	127	65	38	230	52	52	16	120	179	117	54	350
Spanish	6	2		8					6	2		8
Swiss	28	8	8	44	2	1		3	30	9	8	47
Servian	20	2	1	23					20	2	1	23
Danish	64	20	7	91	52	19	19	90	116	39	26	181
Icelandic		1		1						1		1
Swedish	229	46	38	313	101	20	12	133	330	66	50	446
Norwegian	164	35	11	210	340	79	9	428	504	114	20	638
Turkish, N. E. S	159	3		162					159	3		162
Armenian	29			29	1			1	30			30
Egyptian					1			1	1			1
Syrian	13	3	3	19					13	3	3	19
U. S. A. Citizens	4	4	2	10	9	9	3	21	13	13	5	31
Total immigration	17,602	5,038	3,132	25,772	1,120	536	298	1,954	18,722	5,574	3,430	27,726
Returned Canadian	3,339	703	396	4,438					3,339	703	396	4,438
Tourist	87	41	17	145	7	11	2	20	94	52	19	165
Totals	21,028	5,782	3,545	30,355	1,127	547	300	1,974	22,155	6,329	3,845	32,329

TABLE III.

MONTHLY Arrivals of Immigrants for Canada, by Nationalities, at the Port of St. John, for the Fiscal Year ended March 31, 1912.

—	Apr.	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Totals.
African, South	1	....	....	....	....	....	....	....	....	....	....	....	1
Australian	2	....	....	....	....	....	....	....	....	....	1	....	3
Austrian, N.E.S	1,954	....	....	....	....	....	....	....	9	8	6	181	2,158
Bohemian	8	....	....	....	....	....	....	....	....	2	1	....	11
Bukowinian	77	....	....	....	....	....	....	....	1	4	2	81	165
Croatian	8	....	....	....	....	....	....	....	....	....	3	21	32
Dalmatian	....	....	....	....	....	....	....	....	....	....	5	....	5
Galician	255	....	....	....	....	....	....	....	....	9	6	10	280
Hungarian, N.E.S	60	....	....	....	....	....	....	....	4	2	10	28	104
Magyar	14	....	....	....	....	....	....	....	3	8	....	17	42
Ruthenian	1,966	....	....	....	....	....	....	....	148	193	245	1,825	4,377
Slovak	1	....	....	....	....	....	....	....	....	....	....	6	7
Belgian	77	....	....	....	....	....	....	....	7	16	16	25	141
Bulgarian	359	....	....	....	....	....	....	....	76	13	43	395	886
Chinese	....	8	2	5	28	....	....	....	2	9	1	....	55
Dutch	107	....	....	....	....	....	....	....	1	....	1	25	134
French	141	....	....	....	....	....	....	....	34	14	83	53	325
German, N.E.S	182	....	....	....	....	....	....	7	38	39	28	156	450
Alsatian	....	....	....	....	....	....	....	....	1	....	....	....	1
Bavarian	2	....	....	....	....	....	....	....	....	....	....	1	3
Prussian	....	....	....	....	....	....	....	....	....	....	11	2	13
English	2,979	....	1	....	1	....	....	195	488	224	822	2,784	7,494
Welsh	29	....	....	....	....	....	....	13	11	7	12	50	122
Scotch	1,261	7	4	4	2	7	....	152	89	36	173	1,039	2,774
Irish	387	....	....	....	1	....	....	16	37	20	59	255	775
West Indian	8	28	15	5	12	....	....	....	....	....	....	....	68
Bermudian	....	....	5	....	....	....	....	....	....	....	....	....	5
Greek	16	....	....	....	....	....	....	....	....	....	....	26	42
Hebrew, N.E.S	4	....	....	....	....	....	....	1	13	3	2	4	27
" Russian	116	....	....	....	....	....	....	2	80	122	52	95	467
" Polish	....	....	....	....	....	....	....	....	....	6	....	....	6
" Austrian	8	....	....	....	....	....	....	3	1	6	1	1	20
Italian	261	....	....	....	....	....	....	....	1	10	20	57	349
New Zealand	....	....	....	....	....	....	....	....	....	....	1	....	1
Polish, N.E.S	96	....	....	....	....	....	....	5	5	10	....	39	155
" Austrian	442	....	....	....	....	....	....	2	39	93	172	427	1,175
" German	....	....	....	....	....	....	....	....	....	....	....	1	1
" Russian	158	....	....	....	....	....	....	7	16	39	96	139	455
Persian	1	....	....	....	....	....	....	....	....	....	....	....	1
Roumanian	69	....	....	....	....	....	....	....	13	1	1	46	130
Russian, N.E.S	665	....	....	....	....	....	....	2	25	81	100	499	1,372
Finnish	41	....	....	....	....	....	....	14	50	9	54	62	230
Spanish	....	....	....	....	....	....	....	....	6	1	....	1	8
Swiss	14	....	....	....	....	....	....	....	4	2	2	22	44
Servian	4	....	....	....	....	....	....	1	....	5	3	10	23
Danish	22	....	....	....	....	....	....	5	3	....	4	57	91
Icelandic	....	....	....	....	....	....	....	....	....	....	....	1	1
Swedish	139	....	....	....	....	....	....	11	16	5	21	121	313
Norwegian	103	....	....	....	....	....	....	17	5	1	14	70	210
Turkish, N.E.S	74	....	....	....	....	....	....	....	22	15	36	15	162
Armenian	1	....	....	....	....	....	....	....	13	....	10	5	29
Syrian	1	....	....	....	....	....	....	....	16	....	2	....	19
U.S.A. Citizens	2	....	....	....	....	....	....	3	....	....	1	4	10
Totals	12,115	43	27	14	44	7	....	456	1,277	1,013	2,120	8,656	25,772

TABLE IV.

MONTHLY Arrival of Immigrants for Canada, by Occupation and Destination, at the Port of St. John, for the Fiscal Year ended March 31, 1912.

—	Apr.	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Totals.
Agriculturists	4,820	7	5	4	4	7	...	97	391	445	634	5,193	11,607
General labourers	4,817	17	3	....	22	....	....	106	340	157	682	1,252	7,396
Mechanics	437	3	....	....	....	....	....	79	163	131	264	942	2,019
Clerks, traders, &c.	242	2	....	....	2	....	....	28	53	26	80	295	728
Miners	75	....	....	....	....	....	....	26	30	24	65	107	327
Female servants	646	14	14	5	5	....	....	76	141	94	188	580	1,763
Not classified	1,078	....	5	5	11	....	....	44	159	136	207	287	1,932
Totals	12,115	43	27	14	44	7	....	456	1,277	1,013	2,120	8,656	25,772
Maritime Provinces	718	12	14	5	9	7	....	52	39	55	82	323	1,316
Quebec	1,681	18	3	5	31	....	....	32	262	236	410	1,469	4,147
Ontario	3,774	7	9	4	4	....	....	156	504	293	809	2,688	8,248
Manitoba	2,917	2	1	....	....	....	....	50	169	131	240	1,572	5·082
Saskatchewan	1,132	....	....	....	....	....	....	35	62	115	175	1,102	2,621
Alberta	1,046	3	....	....	....	....	....	44	92	115	197	795	2,292
British Columbia	847	1	....	....	....	....	....	87	149	68	207	707	2,066
Totals	12,115	43	27	14	44	7	....	456	1,277	1,013	2.120	8,656	25,772

TABLE

NATIONALITY, Sex, Occupation and Destination of Immigrant Arrivals for

—	Sex.				Trade or								
					Farmers or Farm Labourers Class.			General Labourers.			Mechanics.		
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Males.	Females.	Children.	Males.	Females.	Children.
African, South	......	1	......	1	......	.....	......	......	......	.....	......	......	....
Australian	3	......	..	3	1	......	......	1	......	.....	......	......	....
Austrian, N.E.S.	1,750	279	129	2,158	1,107	123	91	627	72	33	9	2	....
Bohemian	4	4	3	11	1	......	1	2	3	2	......	......	....
Bukowinian	144	13	8	165	84	6	8	60	1	......	......	1	....
Croatian	32	......	....	32	24	......	.....	8	....	....	......	......	....
Dalmatian	5	......	......	5	5	......	......	......	......	......	......	......	....
Galician	223	37	20	280	64	9	15	156	6	5	.....	1	....
Hungarian, N.E.S	80	18	6	104	53	6	4	26	4	2	....	....	....
Magyar	27	10	5	42	15	3	2	11	3	3	1	1	....
Ruthenian	3,480	632	265	4,377	2,023	175	146	1,455	106	113	.....	3	3
Slovak	5	2	.....	7	4	......	....	1	......	.....	......	......	....
Belgian	83	31	27	141	53	8	11	12	5	5	4	2	....
Bulgarian	878	4	4	886	413	2	4	463	1	......	......	......	....
Chinese	55	......	......	55	......	......	......	34	......	...	......	......	....
Dutch	81	22	31	134	40	13	23	21	2	2	7	1	1
French	188	81	56	325	136	41	43	13	5	3	8	6	2
German, N.E.S	213	101	136	450	152	65	110	31	7	19	11	4	....
Alsatian	1	......	......	1	......	......	......	....	....	......	......	......	....
Bavarian	3	......	......	3	2	......	......	......	......	......	......	......	....
Prussian	4	1	8	13	2	....	......	......	......	......	......	......	....
English	4,111	2,006	1,377	7,494	1,962	524	529	846	287	291	713	255	234
Welsh	90	22	10	122	32	3	2	17	3	1	13	2	1
Scotch	1,629	724	421	2,774	595	122	131	253	53	67	311	65	72
Irish	471	224	80	775	180	40	32	132	39	26	37	19	9
West Indian	27	40	1	68	1	.....	....	13	......	......	4	.....	....
Bermudian	1	4	.....	5	1	......	......	......	......	......	......	......	....
Greek	38	3	1	42	30	3	1	6	....	......	......	.....	....
Hebrew, N.E.S	16	9	2	27	1	.....	.....	4	2	2	9	5	....
" Russian	206	132	129	467	12	4	3	61	16	34	61	36	30
" Polish	1	2	3	6	...	......	......	......	......	......	1	1	3
" Austrian	11	5	4	20	1	.....	.....	6	1	3	4	2	....
Italian	313	23	13	349	93	7	9	202	8	2	6	1	....
New Zealand	1	....	.....	1	1	......	......	......	......	...	...	......	....
Polish, N.E.S	116	23	16	155	49	5	4	67	3	4	.....	1	....
" Austrian	866	197	112	1,175	505	50	55	350	29	42	4	2	2
" German	1	......	......	1	1	......	......	.....	......	......	....	......	....
" Russian	401	42	12	455	233	6	3	164	14	7	2	1	....
Persian	......	......	1	1	.....	......	1	......	.....	......	.....	......	....
Roumanian	92	20	18	130	55	8	13	33	......	2	......	......	....
Russian, N.E.S	1,109	137	126	1,372	654	57	97	437	19	19	7	1	1
Finnish	127	65	38	230	27	2	8	94	14	23	5	......	....
Spanish	6	2	.....	8	5	......	......	1	......	......	.....	......	....
Swiss	28	8	8	44	17	2	2	5	......	......	3	1	2
Servian	20	2	1	23	16	1	......	4	......	......	......	......	....
Danish	64	20	7	91	28	4	5	30	1	......	4	3	1
Icelandic	....	1	.....	1	.....	......	......	......	......	......	......	......	....
Swedish	229	46	38	313	75	6	13	134	8	13	8	1	....
Norwegian	164	35	11	210	63	7	7	83	3	1	5	1	....
Turkish, N.E.S	159	3	.....	162	82	1	.....	77	......	.....	......	......	....
Armenian	29	.....	......	29	19	.....	......	9	.....	......	1	......	....
Syrian	13	3	3	19	7	1	2	4	1	1	1	......	....
U.S.A. Citizens	4	4	2	10	1	1	2	2	...	......	1	......	....
Totals	17,602	5,038	3,132	25,772	8,925	1,305	1,377	5,955	716	725	1,240	418	361

V.

Canada, at the Port of St. John, for the Fiscal Year ended March 31, 1912.

Occupation.										Destination.						
Clerks, Traders, &c.			Miners.			Female Servants.	Not Classified.			Maritime Provinces.	Quebec.	Ontario.	Manitoba.	Saskatchewan.	Alberta.	British Columbia.
Males.	Females.	Children.	Males.	Females.	Children.		Males.	Females.	Children.							
....	....	....	....	....	....	....	....	1	....	....	....	....	....	1	....	....
....	....	....	....	....	....	....	1	....	....	1	1	1	....	....	....	1
2	....	....	1	1	1	78	4	3	4	150	438	645	630	162	127	6
....	....	....	....	....	....	1	1	....	....	....	....	1	1	7	....	2
....	....	....	....	....	....	3	....	2	....	5	90	17	16	30	4	3
....	....	....	....	....	....	....	....	....	....	....	....	31	....	....	....	1
....	....	....	....	....	....	....	....	....	....	....	....	5	....	....	....	....
1	....	....	....	....	....	18	2	3	....	3	35	74	117	24	18	9
....	....	....	....	....	....	7	1	1	....	11	1	40	9	36	5	2
....	....	....	....	....	....	3	....	....	....	2	7	11	6	12	4	....
....	....	....	....	....	....	344	2	4	3	78	1,181	878	1,426	399	329	86
....	....	....	....	....	....	1	....	1	....	....	....	6	....	....	1	....
3	....	....	9	6	7	7	2	3	4	23	14	5	66	11	18	4
....	....	....	....	....	....	1	2	....	....	71	178	615	7	13	2	....
5	....	....	....	....	....	....	16	....	....	....	49	5	1	....	....	....
2	1	....	2	....	....	2	9	3	5	22	4	3	44	15	43	3
7	1	....	9	1	2	11	15	16	6	31	111	17	76	43	38	9
6	1	....	4	....	2	17	9	7	5	8	41	44	61	219	66	11
....	....	....	....	....	....	....	1	....	....	....	1	....	....	....	....	....
1	....	....	....	....	....	....	....	....	....	....	....	....	....	2	1	....
1	1	8	1	....	....	....	....	....	....	....	....	....	....	2	1	10
230	89	57	73	26	36	545	287	280	230	390	513	2,987	955	869	752	1,028
5	1	....	17	2	5	6	6	5	1	1	5	26	21	18	29	22
137	36	17	43	11	20	294	290	143	114	194	157	888	497	263	328	447
69	16	4	3	1	....	80	50	29	9	19	37	296	201	59	56	107
4	1	....	....	....	....	37	5	2	1	29	14	20	3	1	....	1
....	....	....	....	....	....	4	....	....	....	4	....	1	....	....	....	....
....	....	....	....	....	....	....	2	....	....	2	....	37	....	....	....	3
1	....	....	....	....	....	....	1	2	....	1	19	5	2	....	....	....
7	1	....	....	....	....	15	65	60	62	18	194	157	70	20	5	3
....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	6
....	....	....	....	....	....	....	....	2	1	....	5	8	6	1	....	....
....	....	....	11	....	....	4	1	3	2	44	204	57	14	....	3	27
....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....
....	....	....	....	....	....	7	....	7	8	....	45	28	56	14	12	....
1	....	....	4	6	7	103	2	7	6	39	214	240	451	102	107	22
....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
....	....	....	2	....	....	19	....	2	2	46	104	247	20	10	4	24
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....
....	....	....	....	....	....	4	4	8	3	2	56	9	2	49	12	....
2	1	....	....	....	....	42	9	17	9	100	324	389	212	89	200	58
....	....	....	1	1	1	45	....	3	6	1	21	156	6	7	18	21
....	1	....	....	....	....	1	....	....	....	1	6	....	....	....	....	1
....	....	....	....	....	....	5	3	....	4	3	8	9	2	14	7	1
....	....	....	....	....	....	....	....	1	1	....	....	17	....	4	....	2
1	....	....	....	....	....	10	1	2	1	4	6	19	32	17	7	6
....	1	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
2	....	....	6	2	1	25	4	4	11	4	16	65	51	46	58	73
2	....	....	2	....	....	20	9	4	3	4	11	16	19	60	35	65
....	....	....	....	....	....	2	....	....	....	4	23	135	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	1	28	....	....	....	....
....	....	....	....	....	....	1	1	....	....	....	14	5	....	....	....	....
....	1	....	....	....	....	1	....	1	....	....	....	4	1	1	2	2
489	153	86	188	57	82	1,763	805	626	501	1,316	4,147	8,248	5,082	2,621	2,292	2,066

PORT OF QUEBEC.

For the fiscal year 1911-12, there arrived at the port of Quebec, 172,734 passengers, of whom 10,444 travelled saloon and 162,290 steerage. Of the saloon passengers, 8,353 were destined to Canada and 2,091 to the United States. Of the steerage passengers, 146,334 were for Canada and 15,956 for the United States. Included in the steerage passengers for Canada were 17,862 returned Canadians and 2,522 tourists, leaving the immigration proper at 125,950 souls, an increase as compared with the preceding fiscal year of 19,329 persons.

Table I deals with the total arrivals of saloon passengers; Table II with the total arrivals of steerage passengers; Table III with the monthly arrivals of immigrants for Canada, and Tables IV and V give summaries of the information obtained from immigrants for Canada upon arrival.

TABLE I.

NATIONALITY and Sex of Saloon Passengers arriving at the Port of Quebec, for the Fiscal Year ended March 31, 1912.

—	CANADA.				UNITED STATES.				CANADA AND UNITED STATES.			
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.
African, South	.....	3	1	4	.....	.....	.....	.....	.....	3	1	4
Australian	7	4	1	12	2	1	.....	3	9	5	1	15
Austrian	2	2	.....	4	.....	1	.....	1	2	3	.....	5
Belgian	3	3	.....	6	.....	1	.....	1	3	4	.....	7
Dutch	5	2	1	8	1	2	.....	3	6	4	1	11
French	21	20	1	42	4	13	1	18	25	33	2	60
German	22	10	.....	32	14	8	.....	22	36	18	.....	54
English	703	488	86	1,277	125	91	12	228	828	579	98	1,505
Welsh	15	5	.....	20	1	.....	.....	1	16	5	.....	21
Scotch	261	151	22	434	41	40	1	82	302	191	23	516
Irish	74	27	1	102	10	14	.....	24	84	41	1	126
West Indian	.....	2	.....	2	1	.....	.....	1	1	2	.....	3
Italian	4	2	3	9	3	2	.....	5	7	4	3	14
New Zealand	3	3	4	10	.....	.....	.....	.....	3	3	4	10
Portuguese	.....	1	.....	1	.....	.....	.....	.....	.....	1	.....	1
Persian	.....	.....	.....	.....	1	.....	.....	1	1	.....	.....	1
Roumanian	.....	1	.....	1	.....	.....	.....	.....	.....	1	.....	1
Russian	7	2	1	10	.....	.....	.....	.....	7	2	1	10
Spanish	1	.....	.....	1	2	.....	.....	2	3	.....	.....	3
Swiss	2	1	.....	3	2	1	.....	3	4	2	.....	6
Danish	2	.....	.....	2	1	2	.....	3	3	2	.....	5
Icelandic	1	.....	.....	1	.....	.....	.....	.....	1	.....	.....	1
Swedish	2	2	.....	4	.....	2	.....	2	2	4	.....	6
Norwegian	2	1	.....	3	2	.....	.....	2	4	1	.....	5
U.S.A. Citizens	69	72	13	154	605	887	61	1,553	674	959	74	1,707
Negro	.....	.....	.....	.....	1	.....	.....	1	1	.....	.....	1
Canadian	2,062	1,996	319	4,377	.....	.....	.....	.....	2,062	1,996	319	4,377
Tourist	1,088	689	57	1,834	57	75	3	135	1,145	764	60	1,969
Totals	4,356	3,487	510	8,353	873	1,140	78	2,091	5,229	4,627	588	10,444

TABLE II.

Nationality and Sex of Steerage Passengers arriving at the Port of Quebec, for the Fiscal Year ended March 31, 1912.

—	Canada.				United States.				Canada and United States.			
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals
African, South	4	2	4	10	3	....	6	9	7	2	10	19
Australian	22	17	5	44	1	1	....	2	23	18	5	46
Austrian, N.E.S.	1,404	350	284	2,038	64	58	18	140	1,468	408	302	2,178
Bohemian	35	29	43	107	7	7	5	19	42	36	48	126
Bukowinian	98	28	15	141	....	....	....	....	98	28	15	141
Croatian	25	10	7	42	4	....	....	4	29	10	7	46
Dalmatian	1	....	....	1	....	....	....	....	1	....	....	1
Galician	351	97	72	520	4	5	2	11	355	102	74	531
Hungarian, N.E.S.	84	45	32	161	7	10	8	25	91	55	40	186
Magyar	81	22	22	125	1	....	....	1	82	22	22	126
Ruthenian	5,253	1,123	902	7,278	9	6	5	20	5,262	1,129	907	7,298
Slovak	47	10	6	63	3	2	1	6	50	12	7	69
Belgian	406	190	188	784	25	6	5	36	431	196	193	820
Bulgarian	462	6	7	475	3	....	....	3	465	6	7	478
Chinese	56	1	....	57	....	....	....	....	56	1	....	57
Dutch	254	121	118	493	62	44	46	152	316	165	164	645
French	702	367	186	1,255	23	19	15	57	725	386	201	1,312
German, N.E.S.	1,125	734	916	2,775	145	122	149	416	1,270	856	1,065	3,191
Prussian	1	....	....	1	....	....	....	....	1	....	....	1
English	27,330	22,138	15,180	64,648	1,316	1,256	725	3,297	28,646	23,394	15,905	67,945
Welsh	520	332	204	1,056	44	28	29	101	564	360	233	1,157
Scotch	8,960	8,892	5,410	23,262	372	383	283	1,038	9,332	9,275	5,693	24,300
Irish	2,757	2,105	864	5,726	152	103	33	288	2,909	2,208	897	6,014
West Indian	9	5	10	24	....	1	....	1	9	6	10	25
Jamaican	1	1	....	2	....	....	....	....	1	1	....	2
Greek	176	17	12	205	3	....	....	3	179	17	12	208
Hebrew, N.E.S.	109	96	118	323	21	19	28	68	130	115	146	391
" Russian	914	831	787	2,532	251	306	362	919	1,165	1,137	1,149	3,451
" Polish	6	2	11	19	....	....	....	....	6	2	11	19
" Austrian	57	45	51	153	2	6	5	13	59	51	56	166
" German	1	1	1	3	....	....	....	....	1	1	1	3
Italian	559	53	46	658	11	6	3	20	570	59	49	678
Newfoundland	....	1	....	1	....	....	....	....	....	1	....	1
New Zealand	9	2	....	11	....	....	....	....	9	2	....	11
Polish, N.E.S	230	103	73	406	15	18	10	43	245	121	83	449
" Austrian	708	267	211	1,186	23	45	14	82	731	312	225	1,268
" German	4	2	1	7	4	6	9	19	8	8	10	26
" Russian	287	113	84	484	98	85	39	222	385	198	123	706
Persian	12	1	....	13	....	....	....	....	12	1	....	13
Roumanian	242	96	126	464	4	2	1	7	246	98	127	471
Russian, N.E.S.	1,866	714	845	3,425	304	261	175	740	2,170	975	1,020	4,165
Finnish	586	331	170	1,087	453	444	244	1,141	1,039	775	414	2,228
Doukhobor	7	3	14	24	....	....	....	....	7	3	14	24
Spanish	98	5	....	103	1	....	....	1	99	5	....	104
Swiss	83	36	19	138	14	10	1	25	97	46	20	163
Servian	50	5	5	60	....	....	....	....	50	5	5	60
Danish	204	71	39	314	174	101	70	345	378	172	109	659
Icelandic	75	76	42	193	4	3	1	8	79	79	43	201
Swedish	912	344	261	1,517	674	458	227	1,359	1,586	802	488	2,876
Norwegian	645	321	200	1,166	1,066	690	242	1,998	1,711	1,011	442	3,164
Turkish, N.E.S.	179	8	5	192	16	3	1	20	195	11	6	212
Armenian	18	2	....	20	3	....	....	3	21	2	....	23
Syrian	29	16	19	64	5	....	....	5	34	16	19	69
Arabian	1	....	....	1	....	....	....	....	1	....	....	1
U.S.A. Citizens	32	39	21	92	1,035	1,556	272	2,863	1,067	1,595	293	2,955
Hindoo	....	1	....	1	....	....	....	....	....	1	....	1
Total immigration	58,087	40,227	27,636	125,950	6,426	6,070	3,034	15,530	64,513	46,297	30,670	141,480
Returned Canadian	9,062	6,191	2,609	17,862	....	....	....	....	9,062	6,191	2,609	17,862
Tourist	1,292	1,139	91	2,522	148	247	31	426	1,440	1,386	122	2,948
Totals	68,441	47,557	30,336	146,334	6,574	6,317	3,065	15,956	75,015	53,874	33,401	162,290

TABLE III.

MONTHLY Arrivals of Immigrants for Canada, by Nationalities, at the Port of Quebec, for the Fiscal Year ended March 31, 1912.

——	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Totals.
African, South	....	4	2	1	1	....	2	....	10
Australian	....	11	13	3	11	3	3	....	44
Austrian, N.E.S.	....	732	286	602	277	116	13	12	2,038
Bohemian	....	13	19	11	15	14	7	28	107
Bukowinian	....	89	6	10	14	7	1	14	141
Croatian	....	19	8	1	7	1	6	....	42
Dalmatian	....	....	1	....	....	....	....	....	1
Galician	....	285	65	92	29	5	6	38	520
Hungarian, N.E.S.	....	19	6	59	27	11	11	28	161
Magyar	....	23	25	10	6	35	15	11	125
Ruthenian	....	4,002	1,537	473	194	445	402	225	7,278
Slovak	....	18	9	18	4	2	7	5	63
Belgian	30	254	77	98	78	120	91	36	784
Bulgarian	3	166	39	40	13	10	84	120	475
Chinese	....	16	7	2	18	4	6	4	57
Dutch	35	152	94	54	63	48	37	10	493
French	2	435	169	201	102	142	147	57	1,255
German, N.E.S.	10	452	822	320	301	314	426	130	2,775
Prussian	....	....	....	....	....	....	1	....	1
English	2,661	18,600	11,884	7,974	6,227	8,855	6,351	2,096	64,648
Welsh	50	341	208	139	81	123	89	25	1,056
Scotch	112	7,875	5,606	2,684	1,849	2,175	2,337	624	23,262
Irish	20	1,862	1,055	684	577	689	613	226	5,726
West Indian	....	12	4	....	5	3	....	....	24
Jamaican	....	....	1	....	....	....	....	1	2
Greek	....	66	65	6	5	17	24	22	205
Hebrew, N.E.S.	....	26	88	77	53	43	11	25	323
" Russian	1	232	384	566	307	601	243	198	2,532
" Polish	....	....	2	1	....	4	....	12	19
" Austrian	....	8	14	40	13	39	7	32	153
" German	....	....	3	....	....	....	....	....	3
Italian	....	396	85	58	45	42	19	13	658
Newfoundland	....	....	....	1	....	....	....	....	1
New Zealand	1	....	4	1	3	....	2	....	11
Polish, N.E.S.	....	143	144	20	31	8	35	25	406
" Austrian	....	432	165	206	51	147	114	71	1,186
" German	....	....	1	6	....	....	....	....	7
" Russian	5	90	123	70	35	54	72	35	484
Persian	1	3	....	2	....	6	....	1	13
Roumanian	....	141	90	46	67	70	29	21	464
Russian, N.E.S.	3	914	510	891	253	277	283	294	3,425
Finnish	49	214	215	158	113	154	112	72	1,087
Doukhobor	....	15	9	....	....	....	....	....	24
Spanish	....	53	3	10	9	7	1	20	103
Swiss	1	31	29	31	5	28	12	1	138
Servian	....	11	5	2	3	....	33	6	60
Danish	15	74	40	54	28	52	25	26	314
Icelandic	....	40	35	64	22	17	14	1	193
Swedish	86	418	286	229	116	191	108	83	1,517
Norwegian	71	275	219	175	112	168	114	32	1,166
Turkish, N.E.S.	1	19	69	30	10	23	12	28	192
Armenian	....	2	1	7	1	2	4	3	
Syrian	....	3	20	18	10	8	3	2	
Arabian	....	....	....	1	....	....	....	....	
U. S. A. Citizens	2	13	19	9	14	23	12	....	92
Hindoo	....	....	....	....	....	....	1	....	1
Totals	3,159	38,999	24,571	16,255	11,205	15,103	11,945	4,713	125,950

TABLE IV.

MONTHLY Arrivals of Immigrants for Canada, by Occupation and Destination, at the Port of Quebec, for the Fiscal Year ended March 31, 1912.

——	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Totals.
Agriculturists	975	14,617	8,570	5,690	3,256	3,439	2,742	1,338	40,627
General labourers	642	9,574	6,176	3,943	2,791	4,120	3,198	1,188	31,632
Mechanics	290	4,325	2,522	1,759	1,806	2,772	2,069	757	16,300
Clerks	161	1,831	938	843	806	920	823	330	6,652
Miners	52	610	343	310	240	390	311	131	2,387
Female servants	208	3,311	2,663	1,463	1,091	1,793	1,635	568	12,732
Not classified	831	4,731	3,359	2,247	1,215	1,669	1,167	401	15,620
Totals	3,159	38,999	24,571	16,255	11,205	15,103	11,945	4,713	125,950
Maritime Provinces	9	208	187	188	141	180	153	73	1,139
Quebec	386	6,970	3,728	2,505	1,915	2,652	2,181	1,035	21,372
Ontario	1,319	13,822	8,839	6,267	4,362	5,883	4,849	1,761	47,102
Manitoba	426	7,014	3,934	2,788	1,580	2,085	1,395	598	19,820
Saskatchewan	316	3,179	2,484	1,480	1,047	1,170	956	415	11,047
Alberta	314	3,443	2,361	1,384	930	1,272	886	352	10,942
British Columbia	389	4,362	3,036	1,642	1,223	1,861	1,525	479	14,517
Yukon	......	1	2	1	7	....	....	....	11
Totals	3,159	38,999	24,571	16,255	11.205	15,103	11,945	4,713	125,950

TABLE

NATIONALITY, Sex, Occupation and Destination of Immigrant Arrivals for

—	Sex.				Farmers or Farm Labourers Class.			General Labourers.			Trade or Mechanics.		
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Males.	Females.	Children.	Males.	Females.	Children.
African, South..	4	2	4	10	1	....	1	....	....	....	....	....	....
Australian......	22	17	5	44	8	1	.	3	...	....	3	....	....
Austrian, N.E.S.	1,404	350	284	2,038	904	211	210	462	51	58	8	4	7
Bohemian	35	29	43	107	18	12	24	8	3	7	1	1	1
Bukowinian	98	28	15	141	33	8	12	62	6	3	....	....	....
Croatian........	25	10	7	42	14	3	3	10	1	1	....	....	....
Dalmatian	1	....	....	1	....	....	....	1	....	....	....	....	....
Galician........	351	97	72	520	232	50	55	115	11	9	1	2	1
Hungarian, N. E. S......	84	45	32	161	55	27	21	17	10	8	3	....	....
Magyar	81	22	22	125	62	12	18	13	6	1	3	....	....
Ruthenian......	5,253	1,123	902	7,278	3,226	642	737	2,004	114	128	4	9	7
Slovak	47	10	6	63	33	3	3	13	2	2	....	....	....
Belgian	406	190	188	784	179	65	81	99	26	21	44	27	32
Bulgarian	462	6	7	475	181	2	4	270	3	3	5	....	....
Chinese.........	56	1	....	57	....	....	....	13	....	....	....	....	....
Dutch	254	121	118	493	126	44	61	52	18	18	44	22	22
French.........	702	367	186	1,255	425	115	118	57	26	18	75	25	14
German, N.E.S.	1,125	734	916	2,775	703	405	687	197	68	106	89	34	47
Prussian.... ...	1	....	....	1	....	....	....	....	....	....	....	....	....
English.........	27,330	22,138	15,180	64 648	10,404	3,481	3,997	7,662	4,542	4,460	4,269	3,027	2,972
Welsh..........	520	332	204	1,056	205	44	47	111	45	51	65	34	39
Scotch...... ..	8,960	8,892	5,410	23,262	3.066	828	985	2,258	1,346	1,552	1,602	1,068	1,241
Irish...........	2,757	2,105	864	5,726	1,311	200	202	642	308	264	222	122	100
West Indian....	9	5	10	24	2	....	1	....	....	....	....	1	....
Jamaican.	1	1	....	2	....	1	....	....	....	....	1	....	....
Greek..........	176	17	12	205	41	2	....	123	4	1	3	1	....
Hebrew, N.E.S.	109	96	118	323	6	....	....	27	17	26	18	18	16
„ Russian .	914	831	787	2,532	67	29	46	233	131	157	210	162	170
„ Polish...	6	2	11	19	1	....	....	....	1	2	1	....	....
„ Austrian	57	45	51	153	6	....	....	13	7	17	8	6	6
„ German..	1	1	1	3	....	....	....	....	....	....	....	....	....
Italian.........	559	53	46	658	95	6	9	410	23	26	8	....	....
Newfoundland..	....	1	....	1	....	....	....	....	....	....	....	....	....
New Zealand...	9	2	....	11	1	.	....	2	....	....	2	....	....
Polish, N.E.S..	230	103	73	406	116	25	33	92	14	23	5	6	2
„ Austrian..	708	267	211	1,186	413	105	128	251	43	54	17	2	1
„ German ..	4	2	1	7	4	1	1	....	....	....	....	....	....
„ Russian ..	287	113	84	484	162	31	33	95	32	31	10	5	3
Persian..... ...	12	1	....	13	7	....	....	4	....	....	1	....	....
Roumanian... .	242	96	126	464	129	44	85	105	25	27	6	....	....
Russian, N.E.S.	1,866	714	845	3,425	1,207	452	660	554	84	95	36	17	23
Finnish.........	586	331	170	1,087	173	44	42	335	58	69	15	7	9
Doukhobor.	7	3	14	24	7	3	14	....	....	....	....	....	....
Spanish...... ...	98	5	....	103	36	....	....	58	....	....	2	....	....
Swiss.	83	36	19	138	38	12	10	20	1	1	6	3	3
Servian.........	50	5	5	60	29	1	....	20	2	2	....	....	....
Danish.	204	71	39	314	110	20	27	59	4	4	13	5	....
Icelandic.. ...	75	76	42	193	46	25	25	11	5	9	5	3	1
Swedish........	912	344	261	1,517	559	85	154	293	52	67	31	18	19
Norwegian.	645	321	200	1,166	317	74	83	217	57	65	38	12	28
Turkish, N.E.S.	179	8	5	192	88	1	....	84	3	2	2	1	....
Armenian	18	2	....	20	6	....	....	6	....	....	1	....	....
Syrian.........	29	16	19	64	16	2	3	2	1	1	2	1	....
Arabian	1	.	....	1	....	....	....	1	....	....	....	....	....
U.S.A. Citizens.	32	39	21	92	10	3	....	6	2	1	4	4	6
Hindoo	....	1	....	1	....	....	....	....	....	....	....	....	....
Totals.....	58,087	40,227	27,636	125950	24,878	7,129	8,620	17,090	7,152	7,390	6,883	4,647	4,770

V.

Canada, at the Port of Quebec, for the Fiscal Year ended March 31, 1912.

Occupation.										Destination.							
Clerks, Traders, &c.			Miners.			Female Servants.	Not Classified.			Maritime Provinces.	Quebec.	Ontario.	Manitoba.	Saskatchewan.	Alberta.	British Columbia.	Yukon.
Males.	Females.	Children.	Males.	Females.	Children.		Males.	Females.	Children.								
3	1	1	....	....	....	....	....	1	2	....	3	3	1	....	2	1	..
1	1	....	1	2	4	4	6	9	1	1	11	10	5	1	1	15	..
10	2	....	5	....	....	72	15	10	9	15	492	364	655	293	157	62	..
1	....	....	3	3	6	4	4	6	5	11	9	1	17	46	19	4	..
2	....	....	1	....	....	11	....	3	....	....	39	19	41	33	7	2	..
....	....	....	....	....	....	5	1	1	3	....	4	12	9	10	....	7	.
....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	..
....	....	....	3	....	....	30	....	4	7	9	109	102	195	60	38	7	..
5	....	....	3	....	....	5	1	3	3	2	14	45	26	50	9	15	..
....	....	....	3	....	....	2	....	2	3	9	12	19	44	30	8	3	..
....	1	....	10	5	4	341	9	11	26	88	1,940	1,412	2,345	843	588	62	..
....	....	....	1	1	1	4	....	....	....	2	5	16	22	2	4	12	..
13	6	3	32	17	26	24	39	25	25	56	330	26	159	109	69	35	..
3	1	....	....	....	....	....	3	....	....	8	153	301	10	....	3	....	..
39	....	....	....	....	....	1	4	....	....	1	47	6	...	....	1	2	..
12	3	3	....	1	3	22	20	11	11	1	105	93	84	52	117	41	..
22	15	5	20	7	7	70	103	109	24	13	622	91	212	129	139	48	1
51	11	14	30	5	21	165	55	46	41	24	245	204	667	896	669	70	..
....	....	....	....	....	....	....	1	....	....	....	....	....	....	1	1	....	..
1,698	1,121	806	606	223	279	6,268	2,691	3,476	2,666	447	9,597	28,921	7,411	4,784	5,274	8,208	6
32	15	13	55	8	21	136	52	50	33	22	130	302	202	71	147	182	..
836	534	381	310	133	215	3,629	888	1,354	1,036	192	3,216	8,557	3,657	1,418	2,138	4,083	1
305	166	76	22	7	7	954	255	348	215	24	933	2,494	1,028	286	348	612	1
1	2	1	....	....	....	...	6	2	8	....	10	3	1	....	....	10	..
....	....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	....	..
2	2	3	....	....	....	2	7	6	8	3	63	136	....	...	3	....	..
21	14	21	....	....	....	5	37	42	55	2	161	95	39	10	12	3	1
69	66	84	....	2	1	75	335	366	329	52	873	853	582	80	59	33	..
1	1	9	....	....	....	....	3	....	....	....	2	16	....	....	....	1	..
8	4	10	....	....	....	4	22	24	18	....	99	40	12	2	....	....	..
....	....	....	....	....	....	....	1	1	1	....	....	2	1	....	....	....	..
7	1	....	14	1	....	12	25	10	11	22	416	108	29	6	23	54	..
....	....	....	....	....	....	....	....	1	....	....	....	1	....	....	....	....	..
....	....	....	....	....	....	1	4	1	....	....	3	2	1	....	....	4	1
....	....	....	14	4	5	42	3	12	10	11	92	93	135	57	11	7	..
1	3	4	15	2	6	95	11	17	18	20	161	278	449	136	122	20	..
....	....	....	....	....	....	1	....	....	....	....	....	3	3	....	1	....	..
1	....	....	9	2	2	30	10	13	15	8	149	168	82	50	18	9	..
....	....	....	....	....	....	....	....	1	....	....	1	12	....	....	....	....	..
....	....	....	....	....	....	14	2	13	14	5	219	56	21	149	14	....	..
9	7	7	31	5	5	102	29	47	55	38	480	618	939	803	361	186	..
3	3	2	52	16	24	190	8	13	24	....	90	773	33	36	44	111	..
....	....	....	....	....	....	....	....	....	....	....	....	....	....	24	....	....	..
....	....	....	....	....	....	2	2	3	....	2	63	29	2	....	....	7	..
6	....	....	1	1	...	14	12	5	5	1	50	25	10	11	28	13	..
1	....	....	....	....	....	2	....	....	3	....	2	42	4	12	....	....	..
8	2	....	4	3	5	29	10	8	3	2	68	58	68	34	55	29	..
1	1	2	....	....	...	32	12	10	5	....	1	....	162	16	.	14	..
5	....	....	13	5	9	160	11	14	12	16	126	300	257	280	204	334	..
6	4	4	12	4	5	156	55	14	15	17	151	167	189	219	235	188	..
4	....	....	....	....	....	1	1	2	3	....	19	172	1	....	....	....	..
4	....	....	....	....	....	....	1	2	....	....	7	12	1	....	....	....	..
6	5	7	....	....	....	1	3	6	8	13	27	14	2	5	3	....	..
....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	..
4	3	....	....	1	3	15	8	11	11	2	22	27	6	2	10	23	..
....	....	....	....	....	....	....	....	1	....	....	..	....	....	....	1	....	..
3,201	1,995	1,456	1,270	458	659	12,732	4,765	6,114	4,741	1,139	21,372	47,102	19,820	11,047	10,942	14,517	11

PORT OF VANCOUVER.

For the fiscal year 1911-12, there arrived at the port of Vancouver 8,523 passengers, of whom 1,688 travelled saloon and 6,835 steerage. Of the saloon passengers 1,439 were destined to Canada and 249 to the United States. Of the steerage passengers 6,045 were for Canada and 790 for the United States. Included in the steerage passengers for Canada were 1,515 returned Canadians and 2,314 tourists, leaving the immigration proper at 2,216 souls, a decrease as compared with the preceding fiscal year of 563 persons.

Table I deals with the total arrivals of saloon passengers; Table II with the total arrivals of steerage passengers; Table III with the monthly arrivals of immigrants for Canada, and Tables IV and V give summaries of the information obtained from immigrants upon arrival.

TABLE I.

NATIONALITY and Sex of Saloon Passengers arriving at the Port of Vancouver, for the Fiscal Year ended March 31, 1912.

—	Canada.				United States.				Canada and United States.			
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.
Australian	1	2	....	3	....	1	....	1	1	3	....	4
Austrian	....	....	....	....	1	....	....	1	1	....	....	1
Chinese	1	1	4	6	....	....	....	....	1	1	4	6
French	1	1	....	2	2	....	....	2	3	1	....	4
German	....	....	....	....	2	1	....	3	2	1	....	3
English	25	15	20	60	4	7	....	11	29	22	20	71
Scotch	6	1	....	7	3	3	4	10	9	4	4	17
Irish	....	1	....	1	....	....	....	....	....	1	....	1
Italian	....	....	....	....	2	....	....	2	2	....	....	2
Japanese	3	....	....	3	....	....	....	....	3	....	....	3
Russian	....	....	....	....	....	1	....	1	....	1	....	1
Spanish	....	....	....	....	1	....	....	1	1	....	....	1
Swedish	....	....	....	....	1	2	....	3	1	2	....	3
Norwegian	....	....	....	....	1	....	....	1	1	....	....	1
U.S.A. Citizens	1	....	....	1	40	38	9	87	41	38	9	88
Canadian	84	73	22	179	....	....	....	....	84	73	22	179
Tourist	676	434	67	1,177	53	56	17	126	729	490	84	1,303
Totals	798	528	113	1,439	110	109	30	249	908	637	143	1,688

TABLE II.

NATIONALITY and Sex of Steerage Passengers arriving at the Port of Vancouver, for the Fiscal Year ended March 31, 1912.

—	Canada.				United States.				Canada and United States.			
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.
African, South	1	....	4	5	....	....	....	....	1	....	4	5
Australian	51	33	22	106	15	15	10	40	66	48	32	146
Austrian, N.E.S	1	....	....	1	2	....	....	2	3	....	....	3
Bohemian	1	....	....	1	....	....	....	....	1	....	....	1
Hungarian	1	....	....	1	....	....	....	....	1	....	....	1
Bulgarian	2	....	....	2	....	....	....	....	2	....	....	2
Chinese	1,442	39	142	1,623	77	8	3	88	1,519	47	145	1,711
French	1	1	....	2	....	....	....	....	1	1	....	2
German	10	....	....	10	5	1	....	6	15	1	....	16
English	152	48	16	216	27	12	7	46	179	60	23	262
Welsh	7	....	....	7	....	....	....	....	7	....	....	7
Scotch	62	22	3	87	2	2	....	4	64	24	3	91
Irish	50	3	2	55	3	2	5	10	53	5	7	65
West Indian	1	....	....	1	1	....	....	1	2	....	....	2
Jamaican	2	....	....	2	....	....	....	....	2	....	....	2
Greek	1	....	....	1	2	....	....	2	3	....	....	3
Hebrew, N.E.S	....	1	5	6	....	....	....	....	....	1	5	6
" Russian	....	....	....	....	1	....	....	1	1	....	....	1
Italian	1	....	....	1	....	....	....	....	1	....	....	1
Japanese	5	1	1	7	1	....	....	1	6	1	1	8
New Zealand	25	9	6	40	3	1	1	5	28	10	7	45
Portuguese	1	....	....	1	....	....	....	....	1	....	....	1
Russian, N.E.S	4	3	4	11	2	....	....	2	6	3	4	13
Finnish	5	....	....	5	1	....	....	1	6	....	....	6
Swiss	1	....	....	1	....	....	....	....	1	....	....	1
Danish	1	....	....	1	1	....	....	1	2	....	....	2
Swedish	6	....	....	6	....	1	....	1	6	1	....	7
Norwegian	3	....	....	3	1	....	....	1	4	....	....	4
U.S.A. Citizens	8	2	4	14	58	9	4	71	66	11	8	85
Hindoo	....	....	....	....	1	....	....	1	1	....	....	1
Total immigration	1,845	162	209	2,216	203	51	30	284	2,048	213	239	2,500
Returned Canadian	1,368	88	59	1,515	....	....	....	....	1,368	88	59	1,515
Tourist	2,021	164	129	2,314	429	46	31	506	2,450	210	160	2,820
Totals	5,234	414	397	6,045	632	97	61	790	5,866	511	458	6,835

TABLE III.

MONTHLY Arrivals of Immigrants for Canada, by Nationalities, at the Port of Vancouver, for the Fiscal Year ended March 31, 1912.

—	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Totals
African, South.	4				1								5
Australian.	29	2	27		9		8	7	6	4		14	106
Austrian, N.E.S		1											1
Bohemian		1											1
Hungarian					1								1
Bulgarian								1			1		2
Chinese	157	189	98	329	97	117	120	224	117	68	72	35	1,623
French			2										2
German	1	1	1		1	1	1	1			3		10
English	35	93	9	15	7	5	7	9	3	4	15	14	216
Welsh		2			1	1	1					2	7
Scotch	13	31	3	5	3	3	8	7	4		1	9	87
Irish	3	9	4	3		1	5	3	19	2	1	5	55
West Indian							1						1
Jamaican	2												2
Greek											1		1
Hebrew					6								6
Italian		1											1
Japanese			2									5	7
New Zealand	15	1	12		1		4	2	2			3	40
Portuguese											1		1
Russian, N.E.S.	10				1								11
Finnish	1					2	1					1	5
Swiss				1									1
Danish											1		1
Swedish		3						3					6
Norwegian		1										2	3
U.S.A. Citizens	4	2	5								3		14
Totals	274	337	163	353	128	130	156	257	151	78	99	90	2,216

TABLE IV.

Monthly Arrivals of Immigrants for Canada, by Occupation and Destination, at the Port of Vancouver, for the Fiscal Year ended March 31, 1912.

—	Apr.	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Totals
Agriculturists..	30	35	20	6	4	2	6	7	5	....	3	14	132
General labourers....	30	129	84	117	62	73	83	105	67	28	57	23	858
Mechanics.....	7	29	4	8	10	4	8	5	5	.....	1	8	89
Clerks, Traders, &c ..	147	69	21	195	26	33	35	88	44	37	25	27	747
Miners.....	4	10	1	....	1	.....	2	2	......	3	...	2	25
Female servants.....	4	9	2	.....	1	.....	1	5	1	.....	6	2	31
Not classified........	52	56	31	27	24	18	21	45	29	10	7	14	334
Totals.........	274	337	163	353	128	130	156	257	151	78	99	90	2,216
Maritime Provinces..	....	1	.....	3	.....	5	...	4	4	4	.....	.....	21
Quebec...	3	12	8	52	11	31	1	37	21	2	9	.....	187
Ontario..	12	26	20	63	32	19	8	31	26	10	13	......	260
Manitoba...... .. .	....	4	5	8	1	1	4	3	7	3	5	3	44
Saskatchewan.......	.....	2	1	3	3	4	......	2	1	......	.....	3	19
Alberta..............	13	12	6	5	2	.....	3	4	1	.....	1	1	48
British Columbia.....	246	280	123	219	79	70	140	176	91	59	71	83	1,637
Totals.........	274	337	163	353	128	130	156	257	151	78	99	90	2,216

TABLE

NATIONALITY, Sex, Occupation and Destination of Immigrant Arrivals for

—	Sex.				Trade or								
					Farmers or Farm Labourers Class.			General Labourers.			Mechanics.		
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Males.	Females.	Children.	Males.	Females.	Children.
African, South....	1	......	4	5	......	......	......	..	......	.....	1	.....	....
Australian. . . .	51	33	22	106	5	3	6	7	3	......	12	1	1
Austrian, N.E.S..	1	......	... .	1	... .	......	......	......	.....	......	1	......	....
Bohemian.......	1	......	.. ...	1	1	.....	......	.....	. .	....	......	.... .	....
Hungarian.	1	.....	... .	1	......	.....	....	.. .	......	......	.....	......	....
Bulgarian..	2	......	....	2	......	......	......	2	......	......	....	......	....
Chinese..........	1,442	39	142	1,623	6	......	......	749	1	7	3	......	....
French	1	1	......	2	......	......	......	.....	......	.. ..	1	.....	....
German..........	10	. ...	......	10	2	......	......	5	....	.... .	3	.....	...
English...... .	152	48	16	216	43	7	1	30	....	......	29	4	1
Welsh.	7	......	......	7	1	......	.....	2	......	......	1	......	....
Scotch...........	62	22	3	87	19	.. .	.... .	12	......	1	8	1	....
Irish.............	50	3	2	55	9	1	2	21	....	......	7	.....	....
West Indian.....	1	. ....	......	1	......	.....	......	.....	......	......	1	......	....
Jamaican.........	2	......	......	2	......	......	......	2	......	......	......	......	....
Greek............	1	... ..	......	1	......	......	......	1	......	......	......	......	.. .
Hebrew...... ...	......	1	5	6	......	......	. ....	......	......	......	......	......	....
Italian	1	......	......	1	......	......	......	1	......	.. ..	......	......	....
Japanese.........	5	1	1	7	. ...	.. .	......	1	......	.....	......	.....	....
New Zealand.....	25	9	6	40	9	2	4	5	......	. ....	4	1	....
Portuguese. ...	1	. ...	.....	1	......	......	......	1	.....	.. ..	......	......	....
Russian, N.E.S..	4	3	4	11	1	1	4	1	......	......	1	......	....
Finnish....	5	....	......	5	......	.....	......	......	... .	..	2	......	....
Swiss.......	1	......	......	1	......	.....	......	......	... .	... ..	.. . ..	......	....
Danish	1	......	......	1	......	......	......	1	.....	......	...	......	....
Swedish	6	......	......	6	1	.....	......	2	......	......	1	......	....
Norwegian.......	3	.....	......	3	......	......	......	2	.... .	......	......	.....	....
U.S.A. Citizens..	8	2	4	14	4	......	......	1	......	......	......	1	4
Totals........	1,845	162	209	2,216	101	14	17	846	4	8	75	8	6

V.

Canada at the Port of Vancouver, for the Fiscal Year ended March 31, 1912.

OCCUPATION.										DESTINATION.						
Clerks, Traders, &c.			Miners.			Female Servants.	Not Classified.			Maritime Provinces.	Quebec.	Ontario.	Manitoba.	Saskatchewan.	Alberta.	British Columbia.
Males.	Females.	Children.	Males.	Females.	Children.		Males.	Females.	Children.							
....	....	....	....	....	....	....	....	....	4	....	....	....	....	....	....	5
6	6	4	3	....	....	3	18	17	11	....	2	2	....	2	7	93
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2
617	23	51	....	....	....	....	67	15	84	21	180	247	38	9	13	1,115
....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	2
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	10
11	2	1	13	....	....	18	26	17	13	....	2	4	1	3	7	199
1	....	....	1	....	....	....	1	....	....	....	....	....	....	....	1	6
4	1	....	3	1	1	6	16	13	1	....	2	4	4	3	10	64
6	....	....	1	....	....	2	6	....	....	....	....	2	1	2	....	50
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
....	....	....	....	....	....	....	....	1	5	....	....	....	....	....	....	6
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
3	1	1	....	....	....	....	1	....	....	....	....	....	....	....	....	7
3	....	....	....	....	....	2	4	4	2	....	1	1	....	....	10	28
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
1	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	11
1	....	....	....	....	....	....	2	....	....	....	....	....	....	....	....	5
....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	1
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
1	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	6
....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	3
1	....	....	....	....	....	....	2	1	....	....	....	....	....	....	....	14
655	35	57	23	1	1	31	145	69	120	21	187	260	44	19	48	1,637

PORT OF VICTORIA.

For the fiscal year 1911-12, there arrived at the port of Victoria 9,205 passengers, of whom 426 travelled saloon and 8,779 steerage. Of the saloon passengers, 373 were destined to Canada and 53 to the United States. Of the steerage passengers, 8.330 were for Canada and 449 for the United States. Included in the steerage passengers for Canada were 2,808 returned Canadians and 133 tourists, leaving the immigration proper at 5.389 souls, an increase as compared with the preceding fiscal year of 1,703 persons.

Table I deals with the total arrivals of saloon passengers; Table II with the total arrivals of steerage passengers; Table III with the monthly arrivals of immigrants for Canada, and Tables IV and V give summaries of the information obtained from immigrants for Canada upon arrival.

TABLE I.

Nationality and Sex of Saloon Passengers arriving at the Port of Victoria, for the Fiscal Year ended March 31, 1912.

—	Canada.				United States.				Canada and United States.			
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.
Australian	1	....	....	1	1	....	....	1	2	....	....	2
Austrian	1	....	....	1	....	....	....	....	1	....	....	1
Chinese	1	2	....	3	....	....	....	....	1	2	....	3
Dutch	1	....	....	1	....	....	....	....	1	....	....	1
German	1	....	....	1	....	....	....	....	1	....	....	1
English	16	10	6	32	2	1	....	3	18	11	6	35
Scotch	5	1	....	6	....	1	....	1	5	2	....	7
Irish	2	1	2	5	....	....	....	....	2	1	2	5
West Indian	1	....	....	1	....	....	....	....	1	....	....	1
Italian	1	....	....	1	....	....	....	....	1	....	....	1
Japanese	5	1	3	9	....	....	....	....	5	1	3	9
Polish	1	....	....	1	....	....	....	....	1	....	....	1
Russian	....	....	....	....	1	....	....	1	1	....	....	1
Norwegian	....	1	3	4	....	....	....	....	....	1	3	4
U.S.A. Citizens	1	1	3	5	12	13	1	26	13	14	4	31
Canadian	45	40	13	98	....	....	....	....	45	40	13	98
Tourist	103	91	10	204	19	2	....	21	122	93	10	225
Totals	185	148	40	373	35	17	1	53	220	165	41	426

TABLE II.

NATIONALITY and Sex of Steerage Passengers arriving at the Port of Victoria, for the Fiscal Year ended March 31, 1912.

—	CANADA.				UNITED STATES.				CANADA AND UNITED STATES.			
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Totals.
Australian	1	5	2	8	5	6	....	11	6	11	2	19
Austrian	....	....	....	....	1	....	....	1	1	....	....	1
Chinese	4,211	40	249	4,500	95	....	1	96	4,306	40	250	4,596
French	1	....	....	1	1	....	....	1	2	....	....	2
German	5	....	....	5	1	....	....	1	6	....	....	6
English	55	10	2	67	8	1	....	9	63	11	2	76
Welsh	2	1	5	8	....	....	....	....	2	1	5	8
Scotch	11	6	5	22	3	1	1	5	14	7	6	27
Irish	8	....	....	8	....	4	2	6	8	4	2	14
Greek	1	....	....	1	1	....	....	1	2	....	....	2
Italian	1	....	....	1	....	....	....	....	1	....	....	1
Japanese	317	361	80	758	....	....	....	....	317	361	80	758
New Zealand	1	3	....	4	1	1	1	3	2	4	1	7
Russian, N.E.S.	....	....	....	....	5	....	....	5	5	....	....	5
Finnish	....	....	....	....	1	....	....	1	1	....	....	1
Danish	4	....	....	4	1	....	....	1	5	....	....	5
Swedish	1	....	....	1	1	....	....	1	2	....	....	2
U.S.A. Citizens	....	....	....	....	30	18	9	57	30	18	9	57
Hindoo	1	....	....	1	....	....	....	....	1	....	....	1
Total immigration	4,620	426	343	5,389	154	31	14	199	4,774	457	357	5,588
Returned Canadian	2,713	46	49	2,808	....	....	....	....	2,713	46	49	2,808
Tourist	76	42	15	133	230	9	11	250	306	51	26	383
Totals	7,409	514	407	8,330	384	40	25	449	7,793	554	432	8,779

TABLE III.

MONTHLY Arrivals of Immigrants for Canada, by Nationalities, at the Port of Victoria, for the Fiscal Year ended March 31, 1912.

	Apr.	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Totals.
Australian.	.....	.....	3	.....	.....	.....	2	2	.....	.....	.....	8	8
Chinese	366	627	646	661	375	538	174	550	140	143	49	231	4,500
French	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1
German	.....	2	.....	1	2	.....	.....	.....	.....	.....	.....	.....	5
English	8	17	1	4	2	3	1	1	26	1	2	1	67
Welsh	.....	.....	.....	.....	.....	8	.....	.....	.....	.....	.....	.....	8
Scotch	2	2	.....	1	1	1	2	.....	2	.....	4	7	22
Irish	2	3	.....	.....	.....	.....	1	.....	2	.....	.....	.....	8
Greek	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1
Italian	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1
Japanese.	49	96	90	78	71	66	130	48	20	19	30	61	758
New Zealand	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	4
Danish	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	.....	.....	4
Swedish	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1
Hindoo	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Totals	430	748	740	745	451	616	310	601	197	164	86	301	5,389

TABLE IV.

Monthly Arrivals of Immigrants for Canada, by Occupation and Destination, at the Port of Victoria, for the Fiscal Year ended March 31, 1912.

	Apr.	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Totals.
Agriculturists.....	14	3	22	9	3	1	9	17	2	4	4	17	105
General labourers.	22	211	83	84	83	122	35	39	56	23	33	21	812
Mechanics	6	3	4	2	1	......	1	1	3	3	2	5	31
Clerks, traders, &c.	349	454	542	554	228	419	211	473	119	121	35	210	3,775
Miners...........	....	5	....	1	1	.....	1	.....	......	.....	2	......	10
Female servants...	1	4	2	3	2	1	1	2	......	......	2	.....	18
Not classified.	38	68	87	92	73	73	52	69	17	13	8	48	638
Totals	430	748	740	745	451	616	310	601	197	164	86	301	5,389
MaritimeProvinces	.....	.....	.....	.....	......	......	......	......	......	......	......	......	......
Quebec..	.....	6	1	1	1	......	4	9	3	5	......	......	30
Ontario..........	1	14	19	17	7	......	3	21	15	1	......	......	98
Manitoba.........	.....	.....	.....	3	...	...	......	2	1	......	......	......	6
Saskatchewan.....	.....	.....	.....	.....	......	......	......	2	......	......	......	......	2
Alberta.	2	.....	.....	.....	......	......	2	3	......	......	......	......	7
British Columbia..	427	728	720	724	443	616	301	564	178	158	86	301	5,246
Totals.........	430	748	740	745	451	616	310	601	197	164	86	301	5,389

TABLE

Nationality, Sex, Occupation and Destination of Immigrant Arrivals for

—	Sex.				Trade or								
					Farmers and Farm Labourers Class.			General Labourers.			Mechanics.		
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Males.	Females.	Children.	Males.	Females.	Children.
Australian	1	5	2	8	....	....	....	1	....	....	....	....	....
Chinese	4,211	40	249	4,500	43	....	....	535	5	5	5	....	....
French	1	....	....	1	....	....	....	....	....	....	....	....	....
German	5	....	....	5	....	....	....	....	....	....	....	....	....
English	55	10	2	67	6	....	....	29	1	....	7	....	....
Welsh	2	1	5	8	....	....	....	....	....	....	....	....	....
Scotch	11	6	5	22	1	....	....	4	1	1	1	1	....
Irish	8	....	....	8	3	....	....	2	....	....	1	....	....
Greek	1	....	....	1	....	....	....	1	....	....	....	....	....
Italian	1	....	....	1	....	....	....	1	....	....	....	....	....
Japanese	317	361	80	758	30	21	1	117	87	15	10	6	....
New Zealand	1	3	....	4	....	....	....	1	....	....	....	....	....
Danish	4	....	....	4	....	....	....	4	....	....	....	....	....
Swedish	1	....	....	1	....	....	....	1	....	....	....	....	....
Hindoo	1	....	....	1	....	....	....	1	....	....	....	....	....
Totals	4,620	426	343	5,389	83	21	1	697	94	21	24	7	...

V.

Canada, at the Port of Victoria, for the Fiscal Year ended March 31, 1912.

Occupation.										Destination.						
Clerks, Traders, &c.			Miners.			Female Servants.	Not Classified.			Maritime Provinces.	Quebec.	Ontario.	Manitoba.	Saskatchewan.	Alberta	British Columbia.
Males.	Females.	Children.	Males.	Females.	Children.		Males.	Females.	Children.							
....	....	....	....	....	....	1	....	4	2	....	....	....	....	....	....	8
3,528	14	85	....	...	....	1	100	20	159	....	30	96	6	2	3	4,363
....	....	...	....	...	....	....	1	....	....	....	....	....	....	....	....	1
1	....	....	1	...	....	....	3	...	...	....	....	....	....	....	....	5
2	....	....	6	....	....	1	5	8	2	....	....	1	....	....	2	64
2	1	5	....	....	....	....	....	....	....	...	....	....	....	....	..	8
....	...	....	3	...	...	1	2	3	4	....	....	....	....	...	1	21
1	....	....	....	....	....	....	1	..	....	....	....	....	....	....	....	8
....	....	....	....	....	....	....	....	....	....	....	....	.	....	....	....	1
....	....	....	....	....	....	....	...	....	....	....	....	....	....	....	....	1
120	12	4	....	....	...	13	40	222	60	....	....	1	....	....	1	756
....	...	....	....	....	...	1	....	2	....	...		....	....	...	....	4
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	4
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
....	....	..	....	....	....	....	....	....	....	....	....	....	....	...	....	1
3,654	27	94	10	....	....	18	152	259	227	....	30	98	6	2	7	5,246

UNITED STATES PORTS.

For the fiscal year 1911-12, there arrived in Canada, via ports in the United States, 31,639 passengers, of whom 2,708 travelled saloon and 28,931 steerage. Included in the steerage passengers were 4,981 returned Canadians and 469 tourists, leaving the immigration proper at 23,481 souls, an increase as compared with the preceding fiscal year of 5,751 persons.

Table I deals with the total arrivals of saloon passengers; Table II with the total arrivals of steerage passengers; Table III with the monthly arrivals of immigrants, and Tables IV and V give summaries of the information obtained from immigrants upon arrivals.

TABLE I.

Nationality and Sex of Saloon Passengers for Canada, arriving at Ports in the United States for the Fiscal Year ended March 31, 1912.

—	Canada.			
	Males.	Females.	Children.	Totals.
African, South	2			2
Australian	3			3
Austrian, N.E.S	1			1
Bohemian	1			1
Croatian	1	3		4
Magyar	1			1
Belgian	11	5	1	17
Dutch	7	1		8
French	62	20	4	86
German	36	21	2	59
English	197	68	3	268
Welsh	1			1
Scotch	55	21	4	80
Irish	13	8		21
West Indian	11	7	4	22
Jamaican		1		1
Greek	14	6	3	23
Hebrew, N.E.S	1			1
" Russian	2	1	1	4
Italian	28	13	5	46
New Zealand	1			1
Roumanian		1		1
Russian	3		1	4
Swiss	6	4		10
Danish	1			1
Swedish	1	1		2
Norwegian	8	2		10
U.S.A. Citizens	2		1	3
Negro		1		1
Canadian	1,076	504	69	1,649
Tourist	276	90	11	377
Totals	1,821	778	109	2,708

TABLE II.

Nationality and Sex of Steerage Passengers for Canada, via Ports in the United States, for the Fiscal Year ended March 31, 1912.

	Canada.			
	Males.	Females.	Children.	Totals.
African, South	17	104	2	123
Australian	11	5	1	17
Austrian, N. E. S	146	31	20	197
Bohemian	14	4	3	21
Bukowinian	3			3
Croatian	179	19	1	199
Dalmatian	25	1	6	32
Galician	223	16	11	250
Hungarian, N.E.S.	123	43	29	195
Magyar	96	50	72	218
Ruthenian	842	146	94	1,082
Slovak	60	19	9	88
Belgian	299	66	35	400
Bulgarian	657	7	2	666
Chinese	3			3
Dutch	98	74	56	228
French	167	84	28	279
German	549	257	283	1,089
English	3,368	1,350	681	5,399
Welsh	64	19	2	85
Scotch	453	368	91	912
Irish	340	196	43	579
West Indian	31	40	3	74
Bermudian		1		1
Jamaican	24	20	4	48
Greek	330	30	12	372
Hebrew, N.E.S.	29	17	24	70
" Russian	171	180	159	510
" Austrian	12	20	15	47
" German	1			1
Italian	4,957	715	511	6,183
New Zealand	3	1		4
Portuguese	2			2
Polish, N.E.S	27	8	8	43
" Austrian	206	55	19	280
" German	9	2	1	12
" Russian	494	66	36	596
Persian	3			3
Roumanian	121	25	18	164
Russian, N.E.S	1,520	215	253	1,988
Finnish	44	11	2	57
Spanish	26	9	6	41
Swiss	23	6	4	33
Servian	38	8	3	49
Danish	119	31	17	167
Icelandic	1	1		2
Swedish	223	50	24	297
Norwegian	107	34	9	150
Turkish, N.E.S	75	7	2	84
Armenian	3	2	2	7
Syrian	8	8	12	28
Arabian		1		1
U. S. A. Citizens	8	4	4	16
Negro	4	74	6	84
Hindoo	1			1
Mexican		1		1
Total immigration	16,357	4,501	2,623	23,481
Returned Canadian	3,633	947	401	4,981
Tourist	335	117	17	469
Totals	20,325	5,565	3,041	28,931

TABLE III.

MONTHLY Arrivals of Immigrants for Canada by Nationalities, via Ports in the United States, for the Fiscal Year ended March 31, 1912.

——	Apr.	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Totals.
African, South	100	13	5	3	....	....	2	....	....	....	....	....	123
Australian	....	5	4	1	....	1	....	....	....	2	3	1	17
Austrian, N.E.S.	71	24	2	8	5	....	6	5	10	32	8	26	197
Bohemian	6	1	1	....	....	1	2	....	....	....	....	10	21
Bukowinian	....	....	2	....	....	....	....	....	1	....	....	....	3
Croatian	36	17	6	3	4	6	22	9	1	10	9	76	199
Dalmatian	4	....	1	....	....	....	....	8	3	....	1	15	32
Galician	181	21	35	....	....	1	....	1	4	4	2	1	250
Hungarian, N.E.S.	33	21	....	6	....	....	11	2	2	22	6	92	195
Magyar	25	20	12	1	15	6	....	11	53	30	10	35	218
Ruthenian	119	61	50	33	16	24	28	52	83	33	45	538	1,082
Slovak	23	9	2	7	4	2	3	3	1	....	11	23	88
Belgian	108	64	9	2	10	6	4	5	18	6	22	146	400
Bulgarian	90	3	2	2	3	2	1	6	53	55	21	428	666
Chinese	....	3	....	....	....	....	....		....	....	....	....	3
Dutch	39	42	17	13	14	20	8	4	8	....	11	52	228
French	41	34	29	10	21	13	19	10	25	11	13	53	279
German	130	92	49	67	45	64	59	57	113	87	72	254	1,089
English	2,198	346	78	65	72	51	32	124	129	207	308	1,789	5,399
Welsh	37	10	....	2	....	1	....	1	1	7	1	25	85
Scotch	303	118	37	17	16	25	19	33	64	96	46	138	912
Irish	154	86	27	21	17	22	15	14	19	58	28	118	579
West Indian	2	3	9	48	2	9	1	....	....	....	....	....	74
Bermudian	....	....	....	....	....	....	....	....	....	....	....	1	1
Jamaican	2	....	5	4	4	8	10	5	....	1	3	6	48
Greek	84	19	25	29	18	12	49	23	16	1	2	94	372
Hebrew, N.E.S.	2	12	8	....	3	....	....	10	21	2	4	8	70
" Russian	39	22	13	19	8	21	12	73	37	115	78	73	510
" Austrian	1	....	....	4	2	1	....	11	12	10	4	2	47
" German	....	....	....	....	....	....	....	....	....	....	....	1	1
Italian	1,808	1,038	417	110	185	188	212	246	249	183	223	1,324	6,183
New Zealand	1	....	....	....	....	1	....	....	....	1	....	1	4
Portuguese	....	....	....	....	2	....	....	....	....	....	....	....	2
Polish, N.E.S.	2	1	....	1	3	....	2	....	....	7	....	27	43
" Austrian	46	15	9	5	2	5	1	20	19	28	12	118	280
" German	6	....	6	....	....	....	....	....	....	....	....	....	12
" Russian	35	24	14	10	4	5	4	24	14	13	25	424	596
Persian	....	....	....	....	....	....	....	....	....	3	....	....	3
Roumanian	34	5	....	1	....	3	3	29	9	13	6	61	164
Russian, N.E.S.	716	203	67	48	61	47	49	51	74	135	58	479	1,988
Finnish	24	12	3	....	1	2	3	3	4	....	5	....	57
Spanish	9	7	....	5	2	....	5	8	....	1	1	3	41
Swiss	1	8	5	1	1	1	5	3	2	1	1	4	33
Servian	....	....	8	2	....	....	4	12	1	2	10	10	49
Danish	41	36	2	2	5	8	2	2	2	2	14	51	167
Icelandic	....	....	....	....	....	....	....	1	1	....	....	....	2
Swedish	110	35	20	9	2	3	5	23	17	13	16	44	297
Norwegian	43	22	8	3	1	7	7	6	2	6	7	38	150
Turkish, N.E.S.	9	5	....	2	7	....	....	6	4	17	7	27	84
Armenian	....	....	....	5	....	....	....	....	....	....	1	1	7
Syrian	1	....	8	1	....	....	1	2	4	8	1	2	28
Arabian	....	....	....	....	....	....	....	....	....	1	....	....	1
U.S.A. Citizens	2	1	1	....	1	2	1	1	1	....	....	6	16
Negro	....	....	38	....	27	18	....	1	....	....	....	....	84
Hindoo	....	....	....	1	....	....	....	....	....	....	....	....	1
Mexican	....	....	....	....	....	....	....	....	....	....	....	1	1
Totals	6,716	2,458	1,034	571	583	586	607	905	1,077	1,223	1,095	6,626	23,481

TABLE IV.

MONTHLY Arrivals of Immigrants for Canada, by Occupation and Destination, via Ports in the United States, for the Fiscal Year ended March 31, 1912.

—	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Totals.
Agriculturists.	2,164	864	240	157	121	158	217	304	329	312	353	3,832	9,051
General labourers..	2,753	1,060	460	156	191	220	211	275	348	385	337	1,412	7,808
Mechanics.........	381	179	69	75	20	56	36	53	48	125	111	559	1,712
Clerks, Traders, &c.	176	87	30	39	37	43	22	30	45	43	44	189	785
Miners..........	58	43	8	11	16	4	10	5	12	36	12	48	263
Female servants....	409	51	57	51	44	31	39	83	100	135	101	281	1,382
Not classified.. ...	775	174	170	82	154	74	72	155	195	187	137	305	2,480
Totals.........	6,716	2,458	1,034	571	583	586	607	905	1,077	1,223	1,095	6,626	23,481
Maritime Provinces	43	30	20	7	8	22	9	19	15	21	15	62	271
Quebec	1,683	651	275	168	140	154	130	189	257	322	200	1,127	5,296
Ontario...........	2,679	973	459	232	268	211	288	373	447	451	465	3,020	9,866
Manitoba..........	931	267	87	49	44	63	37	99	95	146	112	742	2,672
Saskatchewan......	378	161	50	35	32	43	38	60	95	92	71	516	1,571
Alberta	393	122	46	44	32	42	21	59	94	70	105	466	1,494
British Columbia...	609	253	97	36	59	51	84	106	74	121	126	693	2,309
Yukon Territory...	..	1	.....	.....	.....	.....	....	.....	.....	....	1	.....	2
Totals.........	6,716	2,458	1,034	571	583	586	607	905	1,077	1,223	1,095	6,626	23,481

TABLE

NATIONALITY, Sex, Occupation and Destination of Immigrant Arrivals for

	Sex.				Trade or								
					Farmers or Farm Labourers Class.			General Labourers.			Mechanics.		
	Males.	Females.	Children.	Totals.	Males.	Females.	Children.	Males.	Females.	Children.	Males.	Females.	Children.
African, South	17	104	2	123	...	...	...	15	...	...	...	...	...
Australian	11	5	1	17	1	1	1	3	...	...	1	...	...
Austrian, N.E.S	146	31	20	197	95	6	3	41	1	1	5	2	2
Bohemian	14	4	3	21	6	1	2	4	1	...	1	...	...
Bukowinian	3	...	...	3	...	...	...	3	...	...	...	...	...
Croatian	179	19	1	199	81	1	...	89	5	1	4	...	...
Dalmatian	25	1	6	32	19	...	...	6	1	6	...	...	...
Galician	223	16	11	250	107	4	5	116	...	6	...	...	...
Hungarian, N.E.S.	123	43	29	195	70	14	18	50	8	10	1	...	...
Magyar	96	50	72	218	52	20	42	33	10	12	1	...	...
Ruthenian	842	146	94	1,082	709	77	70	117	11	18	9	...	...
Slovak	60	19	9	88	14	4	4	40	3	4	...	...	...
Belgian	299	66	35	400	224	33	21	35	9	5	24	8	4
Bulgarian	657	7	2	666	398	...	1	254	7	1	4	...	...
Chinese	3	...	...	3	...	...	...	...	...	...	...	...	...
Dutch	98	74	56	228	48	23	28	16	3	4	12	3	4
French	167	84	28	279	51	14	14	48	5	6	19	5	...
German	549	257	283	1,089	336	129	217	47	15	21	66	16	11
English	3,368	1,350	681	5,399	1,422	267	269	573	146	103	595	134	103
Welsh	64	19	2	85	25	...	...	8	...	...	12	2	...
Scotch	453	368	91	912	94	21	20	97	12	11	89	26	14
Irish	340	196	43	579	130	22	20	58	5	2	28	6	...
West Indian	31	40	3	74	7	...	...	5	...	...	4	2	...
Bermudian	...	1	...	1	...	...	...	...	...	...	...	...	...
Jamaican	24	20	4	48	1	...	...	5	...	...	2	3	...
Greek	330	30	12	372	53	3	2	258	18	8	4	...	...
Hebrew, N.E.S	29	17	24	70	2	...	...	6	...	...	5	...	3
" Russian	171	180	159	510	4	7	9	44	11	17	70	80	46
" Austrian	12	20	15	47	1	...	1	4	3	3	1	1	2
" German	1	...	...	1	...	...	...	...	...	...	1	...	...
Italian	4,957	715	511	6,183	1,196	111	89	3,509	366	296	100	22	12
New Zealand	3	1	...	4	1	...	...	...	...	...	...	...	...
Portuguese	2	...	...	2	...	...	...	2	...	...	...	...	...
Polish, N.E.S	27	8	8	43	15	3	2	12	...	...	...	1	3
" Austrian	206	55	19	280	136	12	9	64	7	7	3	...	...
" German	9	2	1	12	6	...	...	3	1	1	...	...	...
" Russian	494	66	36	596	366	22	10	112	19	16	13	...	...
Persian	3	...	...	3	...	...	...	3	...	...	...	...	...
Roumanian	121	25	18	164	57	4	2	59	6	10	2	1	1
Russian, N.E.S	1,520	215	253	1,988	1,090	111	164	382	38	58	28	10	4
Finnish	44	11	2	57	11	...	...	22	3	...	6	2	...
Spanish	26	9	6	41	1	...	...	16	3	5	1	...	...
Swiss	23	6	4	33	8	2	3	6	...	...	4	...	...
Servian	38	8	3	49	2	2	...	35	3	3	1	...	...
Danish	119	31	17	167	83	8	8	9	1	1	12	1	1
Icelandic	1	1	...	2	...	...	...	1	...	...	...	...	...
Swedish	223	50	24	297	88	9	5	106	9	8	15	3	5
Norwegian	107	34	9	150	49	5	...	44	2	5	9	1	...
Turkish, N.E.S	75	7	2	84	13	...	...	54	2	...	2	1	...
Armenian	3	2	2	7	...	...	...	1	...	...	1	1	2
Syrian	8	8	12	28	1	1	...	1	3	4	4	...	2
Arabian	...	1	...	1	...	...	...	...	...	...	...	...	...
U.S.A. Citizens	8	4	4	16	1	1	...	1	...	...	2	...	...
Negro	4	74	6	84	...	...	...	1	...	...	1	...	...
Hindoo	1	...	...	1	...	...	...	...	...	...	...	...	...
Mexican	...	1	...	1	...	...	...	...	...	...	...	...	...
Totals	16,357	4,501	2,623	23,481	7,074	938	1,039	6,418	737	653	1,162	331	219

V.

Canada, via Ports in the United States, for the Fiscal Year ended March 31, 1912.

OCCUPATION.										DESTINATION.							
Clerks, Traders, Etc.			Miners.			Female Servants.	Not Classified.			Maritime Provinces.	Quebec.	Ontario.	Manitoba.	Saskatchewan.	Alberta.	British Columbia.	Yukon Territory.
Males.	Females.	Children.	Males.	Females.	Children.		Males.	Females.	Children.								
....	....	....	....	....	....	101	2	3	2	1	105	14	....	....	3	....	....
1	....	....	2	....	....	1	3	3	....	....	3	8	....	3	....	3	....
....	2	....	2	2	4	12	3	6	10	4	55	69	30	25	5	9	....
1	....	....	1	....	1	2	1	....	....	4	2	6	....	5	4	....	....
....	....	....	....	....	....	....	....	....	....	....	3	....	....	....	....	....	....
....	....	....	5	1	....	9	....	3	....	1	22	133	2	2	10	29	....
....	....	....	....	....	....	....	....	....	....	....	1	28	3	....	....	....	....
....	....	....	....	....	....	12	....	....	....	8	142	62	21	11	2	4	....
1	....	....	....	....	....	15	1	6	1	1	10	101	47	22	5	9	....
1	....	....	7	....	....	3	2	17	18	20	....	94	36	52	15	1	....
1	1	....	4	....	....	48	2	9	6	18	400	282	237	75	50	20	....
....	....	....	6	1	1	10	....	1	....	....	3	40	5	1	20	19	....
4	1	....	4	2	3	4	8	9	2	11	52	38	153	31	94	21	....
1	....	....	....	....	....	....	....	....	....	2	165	490	4	....	1	4	....
3	....	....	....	....	....	....	....	....	....	....	3	....	....	....	....	....	....
10	3	1	....	....	....	15	12	27	19	1	12	91	62	19	7	36	....
13	1	....	....	....	....	11	36	48	8	1	130	48	38	16	27	19	....
53	8	....	6	....	....	41	41	48	34	3	77	152	287	332	199	39	....
257	65	35	50	1	....	367	471	370	171	50	648	2,569	639	457	457	578	1
2	....	....	11	1	....	10	6	6	2	2	12	25	13	7	8	18	....
64	20	10	9	....	....	227	100	62	36	3	270	315	78	72	44	130	....
57	11	1	2	....	....	104	65	48	20	8	120	272	56	39	29	55	....
9	1	....	1	....	....	33	5	4	3	....	41	33	....	....	....	....	....
....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	1	....
6	1	....	....	....	....	13	10	3	4	....	4	41	....	....	....	3	....
9	....	....	1	....	....	4	5	5	2	2	150	136	8	1	2	73	....
9	2	4	1	....	....	5	6	10	17	....	37	23	5	3	2	....	....
24	5	6	1	....	....	12	28	65	81	3	177	200	99	7	13	11	....
5	2	2	....	....	....	4	1	10	7	....	14	28	5	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....
21	9	5	94	8	9	88	37	111	100	89	1,837	3,130	163	7	218	739	....
1	....	....	....	....	....	....	1	1	....	....	2	....	1	....	....	1	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	....
....	....	....	....	....	....	2	....	2	3	....	3	13	20	1	6	....	....
....	....	....	2	....	....	26	1	10	3	2	86	76	75	21	20	....	....
....	....	....	....	....	....	1	....	....	....	....	....	12	....	....	....	....	....
1	1	....	....	....	....	17	2	7	10	7	102	454	16	4	13	....	....
....	....	....	....	....	....	....	....	....	....	....	....	3	....	....	....	....	....
1	....	....	....	....	....	8	2	6	5	....	77	39	7	38	2	1	....
5	....	....	4	1	1	27	11	28	26	17	360	524	417	204	116	350	....
1	1	....	4	....	....	4	....	1	2	....	2	36	1	3	1	14	....
4	....	....	....	1	....	3	4	2	1	....	9	21	9	....	....	2	....
2	....	....	....	....	....	3	3	1	1	2	7	7	6	1	8	2	....
....	1	....	....	....	....	2	....	....	....	....	1	46	....	....	1	1	....
4	1	....	....	....	....	16	11	4	7	1	24	24	30	27	44	17	....
....	....	....	....	....	....	1	....	....	....	....	1	....	1	....	....	....	....
1	....	....	6	....	....	27	7	2	6	....	20	67	85	44	31	50	....
2	....	....	1	1	1	22	2	3	3	3	8	16	12	39	36	35	1
4	1	....	....	....	....	....	2	3	2	5	12	60	....	1	....	6	....
1	....	....	....	....	....	....	....	1	....	....	5	2	....	....	....	....	....
1	1	....	....	....	....	1	1	2	6	2	11	13	....	....	....	2	....
....	....	....	....	....	....	....	....	1	....	....	1	....	....	....	....	....	....
1	....	....	....	....	....	1	3	2	4	....	1	8	1	1	1	4	....
1	....	....	....	....	....	70	1	4	6	....	67	16	....	....	....	1	....
1	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....
....	....	....	....	....	....	....	....	1	....	....	....	1	....	....	....	....	....
583	138	64	224	19	20	1,382	896	956	628	271	5,296	9,866	2,672	1,571	1,494	2,309	2

Rejections, by causes, at ocean ports, from December, 1902, to March 31, 1912.

Causes.	Fiscal Year.										Totals.
	1902-3	1903-4	1904-5	1905-6	9 months ended 31 March, 1907.	1907-8	1908-9	1909-10	1910-11	1911-12	
Abscess									1	1	2
Accompanying patients	16		13	39	21	58	60	42	104	53	406
Acute iritis										1	1
Adenitis										1	1
Alcoholism				3	3	1	5	8	3	2	25
Anaemia						2				1	3
Ankylosis						2					2
Arterial sclerosis								1	14		15
Asthma										1	1
Bad character			12			3					15
Barber's itch										1	1
Blennorrhagia										1	1
Blepharitis									1		1
Blindness	1							2		2	5
Bronchitis						1					1
Cancer								1			1
Cataract			1	1	1	3	1			1	8
Choroiditis						1	1				2
Cirrhosis							1				1
Conjunctivitis		1	4	2	4		1	3	13	3	31
Contract labour						23		33	28	3	87
Contravention of Order-in-Council								2	23		25
Convulsions								1			1
Corneal opacity						1	1				2
Criminality			1	6	7	17	6	9	10	5	61
Crippled			2	5	3	3	1	2	1	1	18
Curvature of spine						2		4	2	2	10
Deafness							1				1
Deaf and dumb				4	5	1		2		1	13
Defective sight				3	14	12	17	2	15	3	66
Deformity			1								1
Degeneracy					2						2
Delusions								1	2		3
Desertion									1		1
Diabetes					1						1
Diseased gland								4	5	1	10
Dislocation						1			2	2	5
Dropsy			1								1
Eczema			1								1
Empysema							1				1
Empyema					1	1					2
Epilepsy		9	2	5	3	4		4	8	5	40
Erysipelas						1					1
Favus	7	16	7	2	2	5	2	1	1	3	46
Fever										1	1
Fractures						1		1	1		3
General debility		1		2			2	12		3	20
Goitre				1				1	4	3	9
Gonorrhoea			1				1	1	1	2	6
Gout		1									1
Hare lip							1				1
Head tax										6	6
Heart disease			3	2	2	6	5	5	8	5	36
Hemiplegia						1					1
Hernia			1		4	8	3	11	20	8	55
High temperature								2	5		7
Hip disease								1	1		2
Hydrocele									2		2
Hysteria							1	2	1		4
Idiocy			1	3		3		4	5		16
Illegitimacy									1		1

Rejections, by causes, at ocean ports, from December, 1902, to March 31, 1912—*Con.*

Causes.	Fiscal Year.										Totals.
	1902-3	1903-4	1904-5	1905-6	9 months ended 31 March, 1907.	1907-8	1908-9	1909-10	1910-11	1911-12	
Imbecility	....	....	....	....	3	....	1	3	....	2	9
Immorality	....	....	....	....	3	10	12	22	35	16	98
Indirect passage	....	....	....	....	....	....	4	29	25	112	170
Insanity	....	5	2	11	7	19	13	15	5	15	92
Keratitis	....	....	1	....	....	....	....	....	1	....	2
Lack of funds	....	....	....	1	....	85	67	34	1,038	246	1,471
Lameness	....	....	....	....	....	....	....	....	1	2	3
Leprosy	....	....	....	....	....	....	1	....	....	....	1
Likely to become public charges	....	49	56	73	57	292	66	681	274	164	1,712
Locomotor ataxia	....	....	1	....	....	2	1	....	1	2	7
Lupus	....	....	....	1	4	....	1	....	1	....	7
Malaria	....	....	....	....	....	....	....	....	1	....	1
Melancholia	....	....	1	....	1	....	....	....	....	....	2
Mentally deficient	1	....	3	8	2	9	27	24	22	25	121
Muscular atrophy	....	....	....	....	1	3	2	....	....	....	6
Nephritis	....	....	....	....	....	....	....	....	....	1	1
Nervous disease	....	....	....	....	1	....	....	....	3	....	4
No passport	....	....	....	....	30	3	1	2	....	7	43
Not complying with regulations	....	....	....	....	....	....	2	....	....	....	2
Opium habit	....	....	....	....	2	....	....	....	....	....	2
Paralysis	....	....	1	8	2	....	1	2	2	2	18
Parotiditis	....	....	....	....	....	1	....	....	....	....	1
Pediculosis	....	....	....	....	....	....	....	....	1	....	1
Pityriasis rubra	....	....	....	....	....	....	....	....	2	....	2
Pleurisy	....	....	....	....	1	....	....	....	....	....	1
Pneumonia	....	1	....	....	....	....	....	....	1	....	2
Polygamy	....	....	....	....	....	....	....	2	1	....	3
Poor physique	1	....	....	6	5	31	6	13	41	10	113
Potts disease	....	....	....	....	1	....	....	....	....	....	1
Pregnancy	....	....	....	....	2	5	1	....	2	5	15
Previously rejected	....	....	....	....	....	....	....	....	1	8	9
Procuring	....	....	....	....	1	2	....	....	....	6	9
Prostitution	....	....	....	....	8	18	1	....	....	4	31
Psoriasis	....	....	....	....	....	....	1	2	1	1	5
Runaway from home	....	....	....	1	5	....	....	....	....	....	6
Rheumatism		....	1	4	1	....	....	....	....	....	6
Rickets	....	....	....	....	....	1	....	....	....	....	1
Scabies	....	....	....	....	....	....	2	1	....	....	3
Senility	....	1	....	6	1	9	2	4	15	4	42
Skin disease	....	....	....	....	....	....	....	....	1	....	1
Spinal disease	....	....	....	....	1	....	....	....	....	....	1
Stowaway	....	....	....	....	42	148	74	74	85	86	509
Sycosis	....	....	....	....	....	....	....	....	1	....	1
Syphilis	1	....	2	....	2	1	1	5	....	2	14
Tinea	....	....	....	1	....	2	5	....	....	....	8
Trachoma	246	190	486	322	176	358	94	429	326	100	2,727
Tuberculosis	....	....	4	4	8	11	11	11	26	21	96
Ulcers	....	....	....	....	....	....	....	....	....	5	5
Varicose veins	....	....	1	....	....	1	1	....	13	3	19
Venereal disease	....	....	1	....	....	....	....	....	....	....	1
Weak stomach	....	....	....	....	....	....	....	....	1	....	1
Xeroderma	....	....	....	....	....	....	....	....	....	1	1
Totals	273	274	611	524	440	1,172	509	1,515	2,210	972	8,500

REJECTIONS, by Nationalities, at Ocean Ports, from December, 1902, to March 31, 1912.

Nationalities.	Fiscal Year.										Totals.
	1902-3.	1903-4.	1904-5.	1905-6.	9 mos. ended March 31, 1907.	1907-8.	1908-9.	1909-10	1910-11	1911-12	
African, South..	....	....	....	....	....	....	....	....	....	1	1
Australian... ...	....	....	1	....	....	1	3	5	2	2	14
Austrian, N.E.S.	7	8	15	22	2	34	6	14	32	22	162
Bohemian.	....	....	....	....	....	1	1	....	2	1	5
Bukowinian.....	....	3	7	13	....	4	8	17	9	3	64
Croatian..	....	....	....	1	....	1	4	6	15	1	28
Dalmatian	....	....	....	....	....	1	....	....	....	....	1
Galician........	30	18	58	42	6	11	16	43	38	25	287
Hungarian N.E.S	14	4	3	4	....	7	6	22	27	19	106
Magyar..	....	....	....	....	2	1	....	1	10	2	16
Ruthenian	....	....	2	7	2	3	29	105	124	17	289
Slovak.........	....	....	....	....	3	....	....	4	1	1	9
Belgian.....	....	....	2	3	....	2	2	23	5	10	47
Bulgarian.....	....	....	....	....	....	176	....	50	162	74	462
Chinese	....	....	9	8	1	21	1	9	105	40	194
Dutch..........	....	....	....	....	....	....	2	1	7	6	16
French.........	....	....	2	4	6	12	18	24	22	13	101
German, N E.S.	13	6	10	10	5	33	20	29	72	22	220
Prussian.......	....	....	1	....	....	....	....	....	....	....	1
English.....	2	7	10	56	48	79	93	141	184	179	799
Welsh..........	....	1	....	2	1	3	....	1	6	5	19
Scotch....	....	....	2	5	7	30	31	25	26	28	154
Irish.....	....	....	1	13	5	18	22	16	17	15	107
West Indian....	....	....	....	....	1	1	....	4	4	8	18
Jamaican........	....	....	....	....	....	....	....	1	....	3	4
Greek..........	2	....	1	4	2	47	3	36	90	24	209
Hebrew, N.E.S.	....	....	3	1	1	13	3	....	14	10	45
" Russian	....	1	108	33	33	38	32	72	139	56	512
" Polish..	....	....	....	1	....	....	....	....	....	....	1
" Austrian	....	....	4	....	....	1	1	1	3	7	17
Italian..........	6	8	69	57	29	65	33	169	404	174	1,014
Japanese........	....	....	70	66	98	80	26	18	9	10	377
Newfoundland...	....	....	....	1	....	3	3	....	5	1	13
Polish, N.E.S...	7	7	9	1	2	3	1	....	....	1	31
" Austrian.	....	....	1	....	1	10	9	75	51	11	158
" German..	....	....	5	....	....	....	....	1	2	2	10
" Russian..	....	5	58	11	9	16	6	42	31	9	187
Persian..........	....	....	....	....	....	2	1	2	18	3	26
Roumanian......	....	9	3	2	1	10	3	27	31	4	90
Russian, N.E.S.	149	130	41	75	24	62	87	82	86	65	801
Finnish.....	16	3	10	11	4	8	8	45	19	11	135
Doukhobor.	....	....	....	....	....	....	....	....	....	5	5
Spanish.........	....	....	....	....	....	1	3	4	28	2	38
Swiss...........	....	....	....	....	....	....	....	....	5	....	5
Servian.........	....	....	....	....	....	1	1	5	6	5	18
Danish..........	....	....	3	....	....	2	1	15	9	9	39
Icelandic........	....	1	....	1	4	....	....	1	....	1	8
Swedish.........	5	1	2	4	1	8	5	23	34	8	91
Norwegian	....	3	5	9	....	4	5	11	20	15	72
Turkish, N.E.S.	3	1	2	5	3	10	3	107	147	13	294
Armenian.......	4	18	11	11	2	45	2	132	60	7	292
Syrian..........	8	40	56	2	....	21	4	87	101	18	337
Arabian.........	7	....	....	1	....	....	1	....	6	....	15
U.S.A. Citizens.	....	....	27	17	17	63	2	13	20	2	161
Negro..........	....	....	....	1	....	2	....	....	....	....	3
Hindoo.....	....	....	....	18	120	218	4	6	....	2	368
Mexican.......	....	....	....	....	....	....	....	....	2	....	2
Corean..........	....	....	....	2	....	....	....	....	....	....	2
Totals	273	274	611	524	440	1,172	509	1,515	2,210	972	8,500

DEPORTATIONS, after having been admitted, by causes, from December 1902, to March 31, 1912.

Causes.	Fiscal Year.										Totals.
	1902-3.	1903-4.	1904-5.	1905-6.	9 mos. ended March 31, 1907.	1907-8.	1908-9.	1909-10	1910-11	1911-12	
Abscess	......	......	......	......	2	1	2	2	2	2	11
Accompanying patients	4	3	1	4	35	26	21	......	18	17	129
Alcoholism	......	......	......	......	2	2	27	......	9	5	45
Anaemia	......	......	......	......	......	......	1	......	......	......	1
Arteritis cerebral	......	......	......	......	......	......	......	......	1	......	1
Asthma	......	1	......	......	......	......	......	......	2	1	4
Bad character	......	......	......	......	......	......	7	9	......	3	19
Blindness	......	......	......	1	......	2	3	......	......	2	8
Bright's disease	......	......	......	......	......	2	3	......	......	......	5
Bronchitis	......	1	1	......	......	3	1	......	......	......	6
Cancer	......	1	......	1	......	......	2	......	1	2	7
Cataract	......	......	......	......	......	1	1	......	......	......	2
Catarrh	......	......	......	......	......	......	......	......	1	......	1
Chronicdysentery	1	2	1	1	1	......	......	......	......	......	6
Chronic skin disease	......	......	......	......	......	......	......	......	......	1	1
Criminality	......	1	8	1	12	68	115	130	172	242	749
Crippled	......	4	4	8	4	4	11	......	......	2	37
Curvature of spine	......	......	......	......	......	3	1	......	......	......	4
Cystitis	1	1	......	1	2	1	1	1	......	......	8
Deafness	......	......	......	......	......	2	4	......	......	......	6
Defective sight	......	1	1	6	4	5	11	......	......	......	28
Diabetes	......	......	......	......	1	......	2	......	......	......	3
Dislocations	2	......	......	......	......	1	......	......	......	......	3
Drug habit	......	......	......	......	......	1	......	......	......	......	1
Eczema	......	......	......	......	......	......	1	6	......	......	7
Epilepsy	6	4	2	6	6	15	22	8	10	10	89
Fistula	......	......	......	......	......	1	1	......	......	......	2
General debility	7	8	7	18	......	60	97	27	1	1	226
Haemoptysis	1	1	......	......	......	......	......	......	......	......	2
Heart disease	2	1	3	7	3	5	13	4	3	3	44
Hemorrhoids	1	......	......	......	......	......	......	......	......	......	1
Hernia	......	......	2	3	......	......	8	......	2	1	16
Hip disease	......	......	......	......	......	......	1	......	......	......	1
Idiocy	1	......	4	......	......	......	......	2	......	......	7
Imbecility	......	1	1	1	2	2	35	1	......	......	43
Immorality	......	......	......	......	......	......	......	......	......	24	24
Injured	......	......	......	......	......	7	6	1	......	......	14
Insanity	1	5	5	12	53	110	113	95	121	133	648
Insomnia	......	1	......	......	......	1	......	1	......	......	3
Kidney disease	......	......	......	......	......	......	1	......	......	2	3
Malaria	......	......	......	......	......	1	......	2	......	......	3
Mental weakness	7	8	2	17	20	43	1	9	17	9	133
Muscular atrophy	......	......	......	1	......	......	......	2	......	......	3
Neurasthenia	1	......	1	......	......	......	......	......	1	1	4
Nostalgia	......	......	......	......	......	......	1	......	1	......	2
Paralysis	......	3	1	7	......	5	5	3	2	1	27
Pleurisy	1	1	......	......	......	......	......	......	......	......	2
Poisoning (lead)	......	......	......	......	1	......	......	......	......	......	1
Potts disease	......	......	......	......	......	......	2	......	......	......	2
Pregnancy	......	......	......	......	......	1	......	3	2	2	8
Prostitution	......	1	......	2	......	8	8	6	10	9	44
Public charge	14	19	19	18	28	309	1,074	348	289	343	2,461
Pustular eczema	......	......	......	......	......	......	......	......	......	1	1
Rheumatism	8	7	6	11	10	29	15	8	2	7	103
Sclerosis	......	......	1	......	......	......	......	......	......	......	1
Senility	......	......	......	......	......	8	10	3	1	......	22
Trachoma	......	......	2	......	......	1	1	2	8	......	14
Tuberculosis	8	8	13	6	13	67	54	30	33	39	271
Vagrancy	......	......	......	2	......	21	56	29	61	84	253
Varicose veins	1	1	......	3	2	5	6	......	......	2	20
Venereal disease	......	1	1	......	......	4	4	2	2	2	16
Violation of Immigration Act	......	......	......	......	......	......	......	......	12	8	20
Totals	67	85	86	137	201	825	1,748	734	784	959	5,626

DEPORTATIONS, after having been admitted, by Nationalities, from December, 1902, to March 31, 1912.

Nationalities.	Fiscal Year.										Totals.
	1902-3	1903-4	1904-5	1905-6	9 months ended March 31, 1907.	1907-8	1908-9	1909-10	1910-11	1911-12	
African, South							1			1	2
Australian						1	1	4	1		7
Austrian, N.E.S.		1				4	17	4	10	21	57
Bohemian							3	1		1	5
Bukowinian			1			5	4		3	1	14
Galician	1		1	4	4	15	16	11	10	6	68
Hungarian, N.E.S.				1	1	3	1				6
Ruthenian							1	6	5	11	23
Slovak									1		1
Belgian				1	2		2	8	6	6	25
Bulgarian						65	74				139
Chinese			1		1	1	1	1	2	6	13
Dutch						10	12	3	2	1	28
French			1	1	3	4	18	11	12	22	72
German		1			1	8	7	17	10	6	50
English	43	58	61	98	130	513	1,081	355	342	406	3,087
Welsh		1	2	3	2	2	1	5	3	4	23
Scotch	7	8	9	8	26	61	119	89	90	89	506
Irish		2	2	3	10	31	34	37	23	41	183
West Indian							3	1	6	3	13
Jamaican				1			1				2
Greek							32	2	11	2	47
Hebrew, N.E.S.			1	8	2	2	32	2	3		50
" Russian				1	2	6	11	1	5	2	28
" Polish						1		1			2
" Austrian							2		1		3
Italian	1	4	1		1	13	13	15	13	12	73
Japanese							4	1	1	1	7
Newfoundland								8		3	11
Polish, N.E.S.				1	1	8		2	3	1	16
" German								1			1
" Russian						1	3	1	1	1	7
" Austrian									1	6	7
Roumanian	1	1				2	42	3	2	4	55
Russian, N.E.S.					1	9	49	5	5	16	85
Finnish		4	1			2	3	4	4	3	21
Spanish							1			2	3
Swiss							2	2	1	1	6
Servian									7		7
Danish		2	2	2	1	6	4	2	3	2	24
Icelandic	3			1				1			5
Swedish	3	1	2	1	4	9	7	6	8	12	53
Norwegian	8	2	1	1	1	4	2	3	12	5	39
Turkish, N.E.S.							20			1	21
Armenian										1	1
Syrian						1	1	1	7	1	11
U.S.A. Citizens				2	8	37	98	119	169	256	689
Negro						1	1				2
Hindoo							24	1	1	2	28
Totals	67	85	86	137	201	825	1,748	734	784	959	5,626

Deportations, after having been admitted, by Provinces, from December, 1902, to March 31, 1912.

Provinces from which deports were sent.	Fiscal Year.										Totals.
	1902-3	1903-4	1904-5	1905-6	9 months ended March 31, 1907.	1907-8	1908-9	1909-10	1910-11	1911-12	
Lower Provinces	...	2	......	3	2	14	19	24	25	13	102
Quebec	18	16	11	27	41	136	684	97	165	186	1,381
Ontario	3	3	8	19	79	383	907	378	349	348	2,477
Manitoba	46	64	67	88	66	226	48	97	121	174	1,378
Saskatchewan					3	19	27	19	23	35	
Alberta					4	24	14	63	55	95	
British Columbia	. ..	......	......	....	5	23	49	56	46	108	287
Yukon Territory	.....	......	.....	. ....	1	. ..	......	....	....	.... ..	1
Totals	67	85	86	137	201	825	1,748	734	784	959	5,626

Pamphlets and newspapers ordered for distribution during the year:—

	Copies.
Last Best West	610,400
School maps	10,419
Immigration Act	30,000
Thunder Bay and Rainy River District	5,000
British Columbia ‘Canada the Land of Promise’	20,000
Canada the Land of Opportunity (French)	100,000
Picture Post Cards	500,000
Immigration Facts and Figures	2,000
Classes Canada Calls For	200,000
Welsh Pamphlet	50,000
British Press Association Pamphlet	3,000
New Brunswick	30,000
Homestead Regulations (leaflet)	100,000
London Truth Pamphlet	50,000
Settling on Canada’s Free Lands	200,000
Agricultural Tour Thro’ Canada	250,000
Land Regulations in Canada	200,000
Prosperity Follows Settlement	150,000
Danish Pamphlet	5,000
Calendars	54,135
Nova Scotia	20,000
What Irishmen Say of Canada	25,000
Domestic Servants	50,000
Opportunities in Canada	10,000
Country Called Canada	150,000
British Teachers Pamphlet	100,000
New or Northern Ontario (folder)	10,000
New Ontario Pamphlet	5,000
Le Canada et la France	8,000
Atlas of Canada (British ed.)	150,000
“ (Census ed.)	100,000
Atlas du Canada (French)	20,000
Prosperity of Danish People in Canada	5,000
Five Thousand Facts About Canada	500

NEWSPAPERS.

Canadian Courier	20,000
Canada (London, England)	19,500
Der Norwesten (German)	52,000
British News of Canada (Toronto)	104,000
Canada Posten (Swedish)	24,000
Alberta Herold (German)	13,000
Canada Life and Resources	5,600
Canadian Hungarian	9,000
Daneberg (Danish)	9,000
Hernskungla (Swedish)	16,000
Canadian American	260,000
Venska Canada Tidnengen	24,000
Canada (Swedish)	24,000
Saskatchewan’s Courier	19,760

Norroun (Norwegian)	19,500
Scottish Canadian	3,000
West Canada (Dutch)	60,000
West Canada (Flemish)	60,000
Logberg	35,000

During the year 439,135 pieces of mail were received and attended to in my office, as against 336,274 pieces in 1910-11, an increase of 102,861, or 30 per cent.

The outgoing letters numbered 130,366.

Your obedient servant,

W. D. SCOTT,
Superintendent of Immigration.

REPORT OF THE CHIEF CONTROLLER OF CHINESE IMMIGRATION.

Department of the Interior,
Ottawa, April 25, 1912.

W. W. Cory, Esq., C.M.G.,
Deputy Minister of the Interior,
Ottawa, Ont.

Sir,—I have the honour to submit my report for the fiscal year ending March 31, 1912.

Acting upon a joint memorandum from the Minister of Trade and Commerce and the Minister of the Interior, His Excellency the Governor General in Council authorized the transfer on October 2, 1911, of all matters pertaining to Chinese immigration from the Department of Trade and Commerce to the Department of the Interior. The transfer duly took place, the service being but slightly interrupted although the change meant moving all files, records and documents pertaining to Chinese immigration from the West Block to the Canadian Building.

Although the work, as explained above, has been under this Department for a portion only of the fiscal year 1911-12, it is considered advisable to give statistics for the full year, as well as certain information covering previous years which may be valuable for purposes of comparison.

Fiscal Years.	Exempts.	Paying Tax.	Percentage of total arrivals admitted exempt.	Registration for Leave.	Total Revenue.	
			%		$	cts.
1886	1	211	·47	829	11,693	00
1887	....	124	....	734	7,424	50
1888	....	290	....	868	15,694	50
1889	112	782	12·51	1,322	40,808	00
1890	97	1,069	8·32	1,671	56,258	00
1891	12	2,114	·56	1,617	107,785	50
1892	6	3,276	·18	2,168	166,502	00
1893	14	2,244	·62	1,277	113,491	00
1894	22	2,087	1·04	666	105,021	50
1895	22	1,440	1·50	473	72,475	00
1896	24	1,762	1·34	697	88,800	50
1897	24	2,447	·97	768	123,119	50
1898	17	2,175	·78	802	109,754	00
1899	17	4,385	·39	859	220,309	50
1900	26	4,231	·61	1,102	215,102	00
1901[a]	26	2,518	1·02	1,204	178,704	00
1902	62	3,525	1·73	1,922	364,972	00
1903	84	5,245	1·58	2,044	526,744	00
1904[b]	128	4,719	2·64	1,920	474,420	00
1905	69	8	89·61	2,080	6,080	00
1906	146	22	86·90	2,421	13,521	00
1907 (9 months)	200	91	68·73	2,594	48,094	00
1908	752	1,482	33·67	3,535	746,535	00
1909	695	1,411	33·00	3,731	713,131	00
1910	688	1,614	29·89	4,002	813,003	00
1910-11	805	4,515	15·13	3,956	2,262,056	00
1911-12	498	6,083	7·57	4,322	3,049,722	00
	4,547	59,870	7·06	49,584	10,651,221	50

[a] On January 1, 1901, the Capitation Tax was increased from $50 to $100. [b] On January 1, 1904, the Capitation Tax was increased from $100 to $500.

The above figures of arrivals vary slightly from those given in general immigration returns owing to different standards which prevailed in past years. The Department of Trade and Commerce classed as newly arrived immigrants all persons of Chinese origin returning to Canada after an absence abroad of any period over twelve months, whereas the Department of the Interior did not classify as an immigrant, for statistical purposes, any person who had resided in Canada and who returned after having been absent less than two full years. The practice has been made uniform by adopting the standard of classing as a newly arrived immigrant any person of Chinese origin absent from Canada for over twelve months.

Victoria, Vancouver, Montreal and the head office at Ottawa are the only points where any great volume of work has been added to the Department by the taking over of the administration of Chinese immigration. At those points an increase in the staff has been necessary, but the employees have been kept at the lowest possible number compatible with efficient service.

Prior to October 2, 1911, it was customary to authorize a refund of head tax in the case of Chinese children who upon arrival registered as students, who attended an ordinary public school for a period of two years and who within two and one-half years after arrival applied for the same. Such refunds were made under Section 92 of the Consolidated Revenue and Audit Act which gives to the Governor General in Council power to remit any tax, duty or fine imposed for any purpose whatsoever when it is considered in the public interests so to do. This practice has been discontinued and now the legislation contained in Section 3, Chapter 14, 7-8 Edward VII is enforced—that is to say refunds are granted only to persons of Chinese origin 'securing a higher education in one of the recognized universities.'

Notification has been issued to transportation companies and others concerned that on and after Ocetober 1, 1912, no Chinese will be registered out of Canada as provided for in Sections 20 and 21, Chapter 95, R.S.C., 1906, unless they can by the production of Chinese Immigration Certificates No. 5 or No. 28 satisfy the Controller before whom they appear that they are legally in Canada.

Notification has also been issued that on and after June 1, 1912, the Order in Council of May 9, 1910, (P.C.920) will be enforced against Chinese, and they will thus be debarred entry unless coming by a continuous journey from the country of their birth or naturalization on a ticket purchased therein or purchased or prepaid in Canada.

While the two regulations above referred to were considered advisable as soon as Chinese work was taken over by this Department, it was felt that an immediate change might work considerable hardship in individual cases, and the date for enforcement was consequently placed sufficiently distant to allow for the dissemination of a knowledge of the proposed changes

Your obedient servant,
W. D. SCOTT,
Chief Controller of Chinese Immigration.

No. 1.

OPERATIONS IN EUROPE.

REPORT OF THE HIGH COMMISSIONER.

17 Victoria Street, London, S.W.,
May 1, 1912.

The Honourable
The Minister of the Interior,
Ottawa.

Sir,—I have the honour to forward, herewith, the annual reports of the various representatives of your department who are engaged in emigration work in Europe.

In the first place, I have to record some changes which have taken place in the personnel and the location of these agents during the year: Mr. G. H. Mitchell, who was the agent at Birmingham, was transferred to the High Commissioner's office, and his place was taken in Birmingham by Mr. J. K. Millar, of Saltcoats, Saskatchewan; Mr. A. F. Jury took over the Exeter agency which had previously been held by Mr. MacOwan; Mr. John McLennan, of Aberdeen, in turn replaced Mr. Jury at Liverpool; and Mr. W. B. Cumming went to Aberdeen. I have also to note that the Liverpool and Glasgow offices have been moved into premises better adapted to the purposes of the emigration work.

The list of emigration agents of your department, and their addresses, is now as follows:—

Mr. J. Obed Smith, Assistant Superintendent of Emigration, 11-12 Charing Cross, London, S.W.
Mr. J. McLennan, 48 Lord Street, Liverpool.
Mr. L. Burnett, 16 Parliament Street, York.
Mr. J. K. Millar, 139 Corporation Street, Birmingham.

Mr. A. F. Jury, 81 Queen Street, Exeter.
Mr. M. McIntyre, 107 Hope Street, Glasgow.
Mr. W. B. Cumming, 26 Guild Street, Aberdeen.
Mr. John Webster, 17-19 Victoria Street, Belfast.
Mr. Ed. O'Kelly, 44 Dawson Street, Dublin.
Mr. D. Treau de Cœli, 23 Place de la Gare, Antwerp.

In so large a body of emigrants as that which goes to the Dominion, there must inevitably be a certain number of the less desirable kind, but all the evidence goes to prove that every care is taken by the agents to carry out the regulations of your department, and that, on the whole, the result has been satisfactory.

I would strongly urge the necessity for the supply of adequate quantities of literature suitable both as to matter and appearance, giving a substantial amount of information respecting the various provinces to enable readers to form an idea of their prospects, and as the actual facts concerning Canada are sufficiently attractive to anyone seeking a career in a new country, the advantages offered should be under, rather than over, stated.

As in former years, a number of delegates visited this country at the request of your department, during the past winter, for the purpose of giving personal interviews to inquirers, and some lectures. For the purposes of record I give the names and addresses of those about whom I was advised: —

Mr. A. E. Barnes, Bow Island, Alberta.
Captain D. C. Burk, 106 Shuter Street, Toronto.
Mr. S. Bushfield, Calgary.
Mr. J. Clark, Baldur, Manitoba.
Mr. J. Cowan, Calgary.
Mr. J. Faigey, Manitou, Manitoba.
Mr. J. Farrell, Forest, Ontario.
Mr. W. F. Grover, Minnedosa, Manitoba.
Mr. R. Green, Treherne, Manitoba.
Mr. A. Jackson, Griswold, Manitoba.
Mr. J. Jones, 659 Toronto Street, Winnipeg.
Mr. H. E. Kyle, Oakville, Ontario.
Mr. W. M. Lawson, Gwenlyn Farm, Hayfield Station, Manitoba.
Mr. R. H. Lea, Manitou, Manitoba.
Mr. L. L. McPhail, Kenora, Ontario.
Mr. J. O. McConnell, Calgary.
Mr. J. McGill, Deloraine, Manitoba.
Mr. G. H. North, Pratt, Manitoba.
Mr. B. B. Olson, Gimli, Manitoba.
Mrs. A. Rankin, Vermilion, Alberta.
Mr. T. Seaman, Edrans, Manitoba.
Mr. H. Turner, Miniota, Manitoba.
Mr. D. Sutherland, Ottawa.
Mr. G. Sexsmith, Carman, Manitoba.
Dr. Ninian Woods, Bayfield, Ontario.
Mr. T. Wilson, Whitewater, Manitoba.

Wide publicity continues to be given through the newspapers, and through a constantly growing number of periodicals, and trade papers, to the news cablegram which is sent to me by your department each week. In addition to the extensive circulation thus secured, the information the cablegram contains respecting the natural and industrial resources of the Dominion is regularly transmitted to the leading British financial institutions, as well as to a large number of firms connected with the Dominion by commercial or other interests, some of which include suitable items in their business circulars, reports and bulletins. The Chambers of Commerce throughout the United Kingdom are also supplied and many of them distribute copies among their members. The service has been most valuable in helping to extend the general knowledge of Canadian affairs, and it has been a source of pleasure to note the success which has followed its initiation.

Your obedient servant,

STRATHCONA,
High Commissioner.

No. 2.

REPORT OF J. OBED SMITH.

11 AND 12 CHARING CROSS, LONDON, S.W., April 1, 1912.

The Right Honourable LORD STRATHCONA AND MOUNT ROYAL,
High Commissioner for Canada.

MY LORD,—I beg to submit the following as my report of the Emigration Branch of the Department of the Interior, covering all the agencies in the British Isles and in Antwerp, for the year ending March 31, 1912, and have attached hereto the individual reports to myself from the various emigration agents of this branch, covering their work for the said fiscal year.

Since the last annual report was presented we have obtained more commodious and superior offices in Liverpool, and our agency address there is now 48 Lord Street, one of the most important trade thoroughfares in the city. Our Glasgow agency address has also been changed to 107 Hope Street, a most desirable portion of the city. During the year we have renewed the leases of the premises in Birmingham, York and Aberdeen, and attention has been paid to improving the attractive features of all the various agencies of the department.

The necessity for largely increased office accommodation in connection with our work in London, as mentioned in previous annual reports, together with the urgent need of increased stenographic capacity, in order to keep pace with the ever-changing conditions, not only continue to exist but are becoming daily more urgent. I am impelled to again point out also that our agencies are all under-staffed, and I trust that an early consideration of my recommendations in this regard may be possible.

Not only have the agents of the department been obliged to continue a course of strenuous self-education, in order to meet the growing demands for knowledge in detail regarding Canada, but in no other branch of the public service, I suggest, is there such a grave need for intelligent, sympathetic and individual consideration of the many thousands of human beings of all classes, grades and conditions that make up the general field from which Canada hopes to reap a harvest of desirable citizens, and the demand upon the agents of the department physically, intellectually and financially entitles them to the most favourable consideration of the department.

During the past year a party of twelve British journalists, representing different phases of agricultural political and financial publicity, visited Canada under my charge at the expense of the department, and I have no doubt Canada has already received from the publication of articles on the Dominion's resources and opportunities adequate compensation for the expense involved; and it is clear that the information these journalists obtained will be used for years to come in connection with their work of distributing intelligence regarding Overseas Dominions. In this connection I had an opportunity, personally, of increasing my knowledge of conditions throughout Canada, and propose again suggesting the visit to Canada of several members of the staff in Europe, with the same object of keeping this end of the service actually in touch with the many incidents and changes that the extraordinary prosperity of Canada yearly involves.

So far as it has been possible with the limited staff at our disposal, we have continued the periodical visits of departmental officials to booking agents, in order to discover any way of improving their business to the general advantage of our propaganda, and this is a work which could with advantage be largely increased if officials were supplied to enable us to devote more time to that purpose. As it is, a very large proportion of the booking agents are never visited at all, and in that way our organisation is not by any means taking advantage of all the opportunities which arise for improvement in the work. Yet the result of the inspections thus far makes it abundantly clear that booking agents are business men, and will do business with that government and country which makes it worth their while to do so. My various reports during the last three years on the increased competition in the emigration field to Australia give details which need not be again referred to in this report, but the fact is too obvious to dispose of by argument or sentiment, that the large proportion of booking agents in the British Isles to-day consider it to their advantage to induce people to go elsewhere than to Canada, and to this must in a large measure be attributed the fact that the final figures for the fiscal year will not show so large an increase over the last as at one time was hoped. Some element of disadvantage to our work must be ascribed to the reports reaching here of unfavourable conditions regarding the crops of Western Canada in 1911. I urgently recommend the department to early consider the question of competition, which has unquestionably checked the steady and gratifying annual increase of figures in British emigration to Canada.

We have continued the policy of making the windows of our various agencies as attractive as possible, and have succeeded; and as far as possible with the material and grain at our disposal we have been providing the booking agents with grain boards on which there is a dressed design of grains and grasses. Some of the booking agents make very valuable use of these grain boards, and by increased inspections among booking agents, above referred to, if our staff was sufficiently large, we could gradually increase this free exhibition of Canada's natural products.

It is within common knowledge that Canada receives through the public press on this side of the Atlantic an enormous amount of publicity, which, in part, must be ascribed to the prosperous and progressive conditions existing all over the Dominion, yet the need for judicious advertising, and consequent publicity, is so apparent that the appropriation available for advertising purposes should be largely increased in order to keep the Dominion abreast with other Dominions overseas, who are spending ten dollars to our one in securing British emigrants. Over seven hundred papers during the course of the year carried our advertisements, and others, besides these, receive each week nearly a column of Canadian news, specially prepared and edited by our own staff, some of which items are used extensively, and some only to a limited degree, but this is a branch of our work which can be largely stimulated and improved with more appropriations for advertising. In all statements from this branch a persistent regard for conservative facts and figures has been continued, so that the confidence established with the British people regarding official statements rests on a sure foundation.

Many hundreds of publications on this side of the Atlantic are continually scanned, and I am pleased to say that only on one or two occasions have we had to object to advertisements regarding Canada which have appeared in their columns. With the support of the Emigrants' Information Bureau of the Colonial Office, we have had no real difficulty in preventing a repetition of advertisements which might be deleterious to the welfare of Canada, or intending emigrants thereto.

During the past year two prosecutions were taken against men who had speciously advertised and taken money under false pretences from intending emigrants. After lengthy trials, and considerable justifiable expense to the department, convictions were secured. In one case the prisoner was sentenced to eighteen months' hard labour, and the other to three years' penal servitude. It is hoped that these results will prove a deterrent to others who may be presuming on Canada's prosperity as an opportunity for exploiting credulous emigrants. We purpose taking vigorous action against similar offenders in future. It is gratifying to note that in these cases the frauds happened before any of the intending emigrants had consulted an officer of this department, in accordance with the widely advertised advice to do so. I used the courtesies of the press, which have been made available by judicious consideration, to make the result of these two cases widely known throughout the British Isles.

After seven years' service one of our exhibition motor cars was relegated to the scrap heap during the past year, and a new one has been built and is now on the road. This, with the other remodelled motor car, and our horse exhibition waggons, will be utilised to spread from one end of the British Isles to the other a knowledge of Canada, not only in the market places but amongst the school children in and out of their schools from day to day.

In connection with the new motor car, we are arranging a lantern for illustrative slides on Canada, which can be utilized by our lecturer on the car in giving open air lectures in public places after dark, without the necessity of arranging at great expense beforehand such lectures in a building or public hall, and if this experiment proves successful and of value, it is my intention to suggest that the other motor car be likewise fitted.

The distribution of the school atlas to school children has been diligently carried out during the past year, and has been limited only by lack of supplies of the atlas in question. It is unnecessary to reiterate the great value of educating the children on Canada by a distribution of this atlas, and it is hoped that a very large supply will be available at an early date, so that this good work may be again taken up.

It was with great pleasure I recorded the fact in my last annual report that during the previous fiscal year the new settlers going from the old land to Canada were of an exceptionally high standard. This satisfactory condition has continued, and the returns of the British Board of Trade for the past year make it clear that while a larger number of British people went to Canada than to the United States in 1910, the percentage in favour of Canada so much improved during 1911, that one may dare to hope that with conditions in Canada fairly normal and prosperous we shall not again see the drifting of British people in large numbers to the United States.

During the fiscal year there were 371 sailings of steamships from the British Isles, carrying passengers to Canada. Figures are not complete at the present moment, but I am of the opinion that while the number of British emigrants to Canada for the first nine months of the last fiscal year will be largely in excess of the same period in the preceding year, the figures for January, February and March of this year will not be so gratifying. I trust the competition (which ought to be met) will not too seriously decrease our figures for the balance of this year.

As opportunity permitted the various agencies of the department outside London have been inspected from time to time, and improvements made where needed, and I desire to report, with great pleasure, the exceptional intelligence, care and industry shown by the various agents in their work during the past year. It is no easy matter to take care of all the business that comes to an office when each case we have to deal with is different from every other, and requires exceptional consideration and treatment; but when to this is added the necessity of leaving the office for four and sometimes five nights a week to give lectures on Canada, the remuneration paid to such agents of the department is not nearly, in my opinion, adequate for their services, and does not meet the demands on their financial obligation required to perform their duties to the credit of Canada, and the welfare of the many thousands who leave their old homes to find a new one.

The practice of sending experienced practical farmer delegates from Canada to this side of the Atlantic has been continued, and with the same beneficial results as in previous years. The opportunity of discussing the question in person with a practical man cannot be too highly valued, and should be continued. In addition to the good work done by these delegates, tribute must be paid to the very large number of persons who have returned from Canada to visit their old homes over here. Such has been the demand for information that, without exception, all these home-coming tourists have been obliged to constitute themselves into amateur emigration agents, and great good would assuredly be the result of any proposition whereby many more could be induced to come year by year.

During the year our own officers have given 514 public lectures on Canada at the expense of the department, with success in every case. The various transportation companies have also given many lectures at their own expense, at which they were able to express opinions of a more or less purely business character, to their company's immediate advantage, than is possible in an official, and, therefore, impartial government lecture.

I desire very especially to repeat my previous recommendations regarding the increase in the number of agencies to cover the British Isles. The need for this increase is more urgent year by year, and a glance at the records on file in the department will show the enormous area that each agency, with a very small staff, attempts to control.

This office while controlling the European service has also charge of a very large portion of England, as one of the provincial agencies, and without additional accommodation and a largely increased staff more work cannot be done than is so willingly and efficiently performed by the entire staff at the present time.

The demand for literature has been encouraged by our officers as one of the primary means of interesting those from out of the great mass of the general public who may be thinking of changing their place of abode. Such has been this demand that we have been obliged to print nearly a million pamphlets here, pending the receipt of further supplies from Ottawa, and I would respectfully urge upon the department the fact that the supply of literature should be sufficient to give us a reserve to carry us on until additional supplies are received. We must have good literature and plenty of it if we are to continue our operations with success.

The inspection and approval of all charity aided emigrants is by the Immigration Act laid upon me, and with the assistance of the experienced officers of the department, who personally inspect every one, I venture to say we have been fair to those coming within this classification, and yet have never lost sight of the all-important fact that only those should be admitted to Canada who are likely to prove an acquisition thereto. During the past fiscal year we have had 1,365 cases (embracing 1,983 adults and 1,126 children under 12) presented for approval as charity aided emigrants. Of these I gave the necessary official consent in 1,052 cases.

In addition to inspecting out-going steamers from London, Liverpool and Glasgow, our agents have been called upon to inspect additional steamers at Belfast, Londonderry, Southampton and Bristol, and this list will be increased next month by the sailing of steamers from Plymouth. A statement of each inspection by these agents has been forwarded to Your Lordship, and also to the department, and I would point out that this again throws a duty upon our agents, which, added to those already under their charge, makes it more obvious that our agencies over here are very much undermanned. With the increase of emigration, sailings have become more frequent, and as inspection is necessary, much more has been expected and performed by our officials than in previous years.

The regulations under which emigrants are admitted to Canada and the reasonable interpretation of the same have been effective in eliminating in an ever increasing degree the undesirable, and as I understand the policy of the department is 'quality rather than quantity,' the greatest possible care will be continued in future, to see that it is duly given effect to.

But, notwithstanding all the care taken by officers on both sides of the Atlantic, and all the wisdom displayed by the government and its officials, it is humanly impossible to prevent the getting into Canada of those who may have latent defects, and, therefore, while the number of deportations may be reduced to a minimum, they probably will never altogether cease. Deportations have decreased from year to year and now they are less than one-half of 1 per cent of the immigration. On the arrival of the unfortunates at a port in the British Isles, we have not failed to continue the humanitarian policy of seeing that they are placed with friends, or otherwise cared for. In this connection I desire to say that the transportation companies have very cordially met the suggestions of the department.

There are six independent steamship corporations carrying passengers to Canada, and one railway company not at present using their own steamers. All these seven transportation companies have actively continued their programmes along progressive although somewhat different lines, and have shown very commendable care in confining their operations to the policy laid down by the department from time to time, so that any doubtful case that has come before them has been submitted for the opinion of this office before booking takes place. This, it will be obvious to Your Lordship, is a splendid means of preventing the possibility of undesirables reaching Canada, and saves the disastrous loss which occurs to one who, having sold up his home here, is rejected at the port of landing in Canada. I wish to express the cordial thanks of myself and staff for the great assistance given by all transportation companies in this work of handling human beings in such large numbers, and under so many different conditions.

The most friendly co-operation with this department is happily continued by the British government's emigrants' information office, the local government Board and the Board of Trade; Canada owes a debt of gratitude to the first named in particular for the extensive and careful way in which the most exhaustive information regarding our Dominion is prepared and given out by their officials. It means more than some Canadians adequately understand to have officials of the British government able to verify the correctness of facts that our own officers may state.

During the past fiscal year 37,687 persons visited Charing Cross Office, London, to make personal enquiry with a view to emigration, and get a supply of literature. On many occasions it has been difficult to properly attend to this most important part of the business for lack of office accommodation. Indeed the grievous necessity for a separate department to which women and girls can be referred for private information at the hands of some of our skilled women officials, is one that I hope the department will take means to rectify, as there is no limit to the demand in Canada for respectable women of all classes, and there ought to be provided a separate room where women could have their questions answered by officials of their own sex.

The attractiveness of the windows in Charing Cross is again evidenced by the enormous number of people who stop and inspect what is shown therein. During the past fiscal year considerably over a million persons have so stopped and inspected our exhibits, and in a somewhat lesser but satisfactory degree our provincial and Belgian agencies have been telling the story of Canada's progress. This is, I submit, abundant evidence of the need for providing our agencies with a sufficient supply of exhibits of the natural resources and industries of Canada.

We received during the year 297 boxes of grain and grasses in the straw and threshed grains, also a supply of apples, all of which have been used to the best advantage, but as there is no more advantageous method of advertising than to show in the concrete what Canada can do, greater supplies are recommended.

This office (and all the provincial agencies) has had to deal with an enormous mass of correspondence, and only by working many hours after the office is closed to the public has the staff been able to keep abreast of the work. The attachments to the files in the London office alone exceeded one hundred thousand during the past year. In addition, this office sent out 117,900 packages of literature.

Many of the provinces of Canada have supplied this branch of the service with their own literature, but again I have to report, the supply has never yet equalled the demand, except for a few days after the supply has actually come to hand. I understand the question of literature is engaging the attention of the department, and I can only repeat that the distribution facilities of the department here are quite equal to any quantity which may be sent to us for judicious use.

I have exceeding pleasure in stating the continuance of the most cordial relationship between the agents of the various provinces of Canada and this department, and altogether apart from any official co-operation, which is highly desirable and essential, there is no lack of that personal cordiality which is a splendid attribute to emigration work for the general welfare of Canada and the particular advantage of each province.

The remarks herein also apply to the agency in Antwerp, but I am of the opinion that the time has arrived when a separate agency for Holland should be established. I would again urge early consideration of my previous recommendations, that an agency for emigration work in Scandinavia be opened in Copenhagen, which has already been reported upon to the department in detail.

In conclusion, I desire to offer to Your Lordship my sincere personal thanks for the kind consideration of difficult questions arising from time to time, and feel that the occupying of Your Lordship's attention and time on these matters has been amply repaid by the fact that harmony and good will have been continued, and the welfare of Canada enhanced.

Your obedient servant,

J. OBED SMITH,
Assistant Superintendent of Emigration.

No. 3.

REPORT OF A. F. JURY.

81 Queen Street, Exeter, March 30, 1912.

The Assistant Superintendent
of Emigration for Canada,
London.

Sir,—In presenting my fifteenth annual report, though my first as agent for the west of England, it affords me satisfaction to note the increased results following the efforts of the department to induce emigration from the United Kingdom to Canada, both as regards quantity and quality. The results would have been even better, however, especially from this part of England, where farming is largely pastoral, and only a limited number of the natural increase of the rural population can be employed upon the land, had all those desirous of emigrating to Canada possessed the necessary money to do so. There are no other great industries as there are in the Midlands and the north to absorb the surplus, and wages are so low in consequence upon the farms, that only a small proportion of the agricultural labourers, especially if married, can save the money to pay their fares to Canada. I have come to the conclusion after years of thought upon the subject, the reading of Canadian newspapers, especially those devoted to the interests of the farmers, that the great dearth of farm help in Canada is retarding the development of our greatest industry, and that the time has arrived when a departure should be made from present methods, to supply this long felt and ever increasing want. This naturally leads me to suggest a means by which the department can meet and overcome the difficulty by assisting the supply that is here to get to the demand in Canada. I do not think this problem is unsolvable by a modern utilitarian government entering the field with a practical scheme either of collecting fares advanced by farmers who are prepared to do so or advancing fares itself on a self-supporting basis to farm labourers. I would respectfully suggest that a start be made by notifying farmers, by circular, who require help, and who are prepared to engage men by the year at the current rate of wages in their district, and are prepared to advance the ocean fare or part of it, and who notify the Department of the Interior of their requirements, that the department agree to deliver such experienced agricultural labourer or labourers, as they are willing to advance the fares for, to nearest distributing point to the farmers' home, the farmers making such advance to have the legal power, according to a duly signed contract, to deduct five dollars per month from said labourer to whom such advance has been made, until such advance has been paid in full. The farmer delegates, with the assistance of the government agents in this country, could select the men, and the farmer delegates could take them to their respective districts on their return to Canada. This would meet the demand during the very early spring, and later in the season it could be done by the government agents, or by officials especially appointed for that purpose. In no case should farmers be supplied who are not prepared to pay the full current rate of wages, and none but experienced farm hands should be handled by government officials. I think by this means the reasonable demand for farm help could be supplied, and by getting the purely country-bred men, they would not only go upon the land, but would stop there, most of them ultimately becoming farmers, developing the virgin soil, and in a short time become consumers of the product of the urban district, thereby causing a demand for the labour of the city workman. I know this is open to the stereotyped objection, that action of this kind is outside the proper sphere of the government, but the proper sphere of modern governments is utility, and this not only seems useful, but seeing how the Canadian farmer is hampered in proper and profitable cultivation of his land on account of his inability to secure sufficient supply of labour, a necessity. If this system failed to reach the reasonable demand for labour on the land, then I would suggest the government advance the fares of agricultural labourers on a self-supporting principal, of charging the emigrants 5 per cent interest on the money advanced, and making the farmer responsible for the collection of the money, to be paid to the local postmaster for the government. Most of the States of the Australian Commonwealth, which is one of our keenest competitors for immigrants, have from time to time resorted to assisted passages for farm labourers. The State of New South Wales is at present offering the following:—

'In the case of farm hands the sum of £6 must be lodged as a deposit. In special cases farm hands may deposit £3 only. In every case the deposit (less £2) may be refunded by the Immigration and Tourist Bureau in Sydney immediately upon arrival of the passenger, the remainder of the deposit money being refunded three weeks after he has been satisfactorily employed as a farm worker in New South Wales. A domestic servant must deposit the sum of £2 which is returned to her three weeks after she has been employed as a domestic servant in New South Wales to the satisfaction of the director of the immigration and tourist bureau.'

I would not suggest under any circumstances that the above scheme should apply to domestic servants, the economic conditions being entirely different, the latter being a class employed by people who should be in a position to supply their wants through the various agencies that exist for that purpose, but there is not an agricultural labourer class in Canada, the hired man of to-day is the farmer of to-morrow. An adequate supply of farm labour is of national importance, the most important factor in national development; domestic servants are often only a matter of additional family comfort. My excuse for suggesting this departure from the usual methods is not only the necessity, but the urgency of the case referred to, and I trust it will receive the consideration from the department that its importance deserves. If in any of the provinces there is a law making contracts of labour when made outside the respective province null and void, such acts could, in my opinion, be amended by common consent to exempt farm labourers.

The work of the past year has followed so closely the lines of the last fifteen that no special mention is required other than to point out that the changed conditions under which government lectures have been delivered, have caused a large amount of annoyance to all concerned, coming into operation as they did at a time when most of the lectures for the season had been arranged through the local booking agents. The prohibition of the name of the local steamship agents appearing in connection with government lectures, coupled with the fact that they have been very inefficiently advertised by the department there, has caused a considerable falling off in the attendance, and I am convinced that the best and cheapest method of arranging successful lectures is through the most energetic local booking agents. But I think the time has arrived for a departure from the present system of lecturing. The delivering of lantern lectures has been followed for the last fifteen years, except when the government agents have been able to borrow cinematograph films from some of the transportation companies, which under the new regulations we will be unable to do, and I would suggest that the department supply their agents here with films, or that the lecture propaganda be very considerably curtailed. I consider the lectures without films in this district have been a waste of money, and that the same amount of money spent on judicious newspaper advertising would have produced much better results. The conditions in regard to lectures have materially changed during the last fifteen years; previous to that the steamship companies did very little lecturing on their own behalf, and that little was discontinued when I took up the work. Now most of the companies have their own lecturers, and films, and there is a considerable amount of overlapping. I shall be much surprised if during the ensuing lecture season every steamship company running to Canada does not have its own lecturers, and if we do not have moving pictures at government lectures, we shall be unable to obtain an audience, without a large expenditure to advertise them, which money would be much better spent in newspaper and poster advertising, and the agents left free to spend their time to better advantage than lecturing to fifty or sixty people, most of whom are generally too old, or too young, to emigrate to Canada.

I would again impress upon the department the importance of sending to this country a good supply of fruit, corn on the cob, tobacco and hops for exhibition in the windows of the government offices, and at agricultural shows, to show the British public that there is something else raised in Canada besides ice palaces, and to illustrate the agricultural capabilities of the Eastern Provinces and British Columbia. I am assuming that the usual supply of grains and grasses will be sent from the Prairie Provinces.

The correspondence received for this year numbers 8,035, letters sent out 7,860; bonus applications forwarded to Ottawa 3,253; the latter showing an increase of 429 on last year.

Your obedient servant,

A. F. JURY,

Canadian Government Emigration Agent.

No. 4.

REPORT OF W. B. CUMMING.

26 GUILD STREET,
ABERDEEN, March 30, 1912.

J. OBED SMITH, Esq.,
Assistant Superintendent of Emigration,
London.

SIR,—I have the honour to submit the report of the Aberdeen office for the year ending March 31, 1912.

I took charge of this office on May 1, 1911, so that during the first month of the fiscal year my predecessor was in charge.

The plan I adopted during the year was to visit the different feeing markets, to which farm servants came to meet farmers for engagement. My presence at these markets was known and advertised at each point by the booking agents, who arranged an interview for me with any farm servant who was thinking of going to Canada. In this way, information was imparted to inquirers without prejudicing the large farmers against our work.

Later on, in the months of July and August, we attended agricultural shows, where we had out tent, with samples of grain, both in straw and in bags, which we showed to visitors, and at the larger shows, we had our Canadian wagon in addition to the tent. At Inverness, where the Highland show was held this year, we had a twenty-foot space nicely decorated with Canadian grains and fruit.

In October we began to deliver lectures, accompanied by lime-light views illustrating Canada. We began on 23rd October and ended on 13th March, and between these dates we delivered 77 lectures, which were given, not in towns or cities, but entirely in the rural districts, the great majority being held in school-houses. These lectures were well attended, and much interest was shown in them.

The records in this office show that from January 1 until December 31, 1911, there were 3,804 applications made for bonuses. For the corresponding period the previous year there were 3,042, thus, in the year 1911, we are 762 ahead.

Taking the first three months of 1912, the number of bonus applications is not quite up to last year. The decrease in this district is owing to several causes, among which we may mention:—

1. Some of the drastic rules made by the Steamship Conference regulating the passenger traffic between Great Britain and Canada, so irritating to many of our most enterprising booking agents,—the secretary of this Conference becoming so obnoxious that some of these booking agents ceased to advertise Canada, and emphasized Australian emigration to evade the restrictions, and as a consequence Canada only got their *indirect* work for some time, or until several of the individual shipping companies forming this conference wrote these shipping agents, advising them that the secretary of the conference had overstepped his instructions. There are no restrictions relating to Australian bookings.

2. Another element which has a strong tendency to lower our numbers is the fact that the Australian and New Zealand governments are paying a much higher bonus for their emigrants and are also holding out 'assisted passages' as an inducement, the offer of which is gladly accepted by many unable to pay the passage money themselves.

3. The present coal strike is materially affecting those who are undecided, whether they will go to Canada or not.

4. A further element entering into our work is the fact that our field is limited, that is to say, we appeal only to farmers, farm servants, and domestic servants, and while we believe there is quite a number of them who will yet go out to Canada, the number comprising these classes is comparatively small. On the other hand, there is a large number of people engaged in other enterprises, who would go out to Canada to the land, if circumstances were such that they could. We have in mind carpenters, blacksmiths, stonemasons, and clerks who have gone out to Canada on to the land, and have made excellent settlers. If an inducement could be made whereby booking agents could secure bonuses on such, we believe that our numbers would be increased materially. The general sentiment throughout Scotland is in favour of Canada, but the emigration propaganda instituted by our sister dominions in Australia and New Zealand is appealing to a large number. I cannot close this report without bearing testimony to the persistent and faithful work rendered by Mr. Hugh McKerracher. He has continued his work, travelling through the country with horses and van, giving short addresses, and distributing literature to the children as he passes country schools, and in villages where people assemble to look at the Canadian grains. In addition to these, he has delivered during this winter, over 40 evening lectures, and at these, shown lime-light views of Canada. In this way, he is reaching agriculturists it would not be possible to reach in any other way.

Your obedient servant,

W. B. CUMMING,
Canadian Government Emigration Agent.

No. 5.

REPORT OF M. McINTYRE.

107 Hope Street,
Glasgow, April 1, 1912.

J. Obed Smith, Esq.,
Assistant Superintendent of Emigration.
London.

Sir,—I beg to submit my report for the year ending March 31, 1912.

The emigration to Canada from the south half of Scotland for the year, everything considered, has been as large as one could reasonably expect. While last year was a record one, the beginning of this looked as if it were going to exceed it. There have, however, arisen during the last half, incidents which have had a deterrent effect. One of the first things was the dockers' strike. Sailings were interfered with to such an extent that a certain number changed their minds altogether (Canada may possibly get these at some later date) and during the last six weeks, which is always the heaviest season, things have been in such a turmoil on account of the coal strike, with trains not running and sailings in doubt, that people have not known what to do, so have largely done nothing. Works being suspended, some have not had the opportunity of getting together the necessary amount of money to move.

Taking the whole year, compared with last, we have done very well in the agricultural and domestic servant classes. My reasoning of this is from the bonus claims I have received, which is the best means I have of forming an estimate. Last year I received 3,958 claims, and this year I have had 4,237, which shows an increase of 279, from which one can see there is very little difference. Still, while we have had only a few more bonus-earning people, there have been considerably more of that class leaving Scotland, and some of them most excellent emigrants, but these have gone to New Zealand and Australia. Australia is a very mighty competitor of Canada with respect to the developing classes. As near as I can learn, there are two chief factors to induce emigrants to go to Australia as against Canada. The first is the assisted passage. There are many of the agricultural and domestic servant classes here, who find it impossible to save enough to buy a ticket, and when they are offered good wages and free passage, that, of course, takes them. The second factor is climate. Canada has been mentioned so often on this side of the Atlantic as the 'Land of Snow' and severe frost, that when Australia is always spoken of as having such a beautiful, warm climate, that weighs very considerably with those having the necessary capital, and of course, Australia is making all it can of climate in appealing to the people.

In my lectures this season, I have given a great deal of attention to Canada's climate, in an endeavour to give the people a better conception of what it really is like.

Another thing telling somewhat against us, is that the booking agent now has a slight advantage in booking a passenger to Australia over Canada, and while some of the agents are adhering closely to Canada, there are others who think only of which booking is going to give them the highest commission, and advise their clients accordingly.

As heretofore, during the winter season I have given a series of lectures presenting Canada's opportunities for the agricultural and domestic servant classes in as true a light as I possibly knew how. I have also endeavoured to make use of the delegates where their services would prove most beneficial. The season in which these delegates are of greatest use in this district is from the beginning of November to the end of March.

During the year 81 steamers with passengers have been inspected, and all vessels arriving at this port with rejections or deports have been met. Sixty-nine deports have been looked after on arrival, 41 of whom belonged to this district. Letters received numbered 13,056; those sent, 9,063, and the number of interviews was 7,428. I have this year followed my practice of several years, of going to different places to interview people, when notified by the booking agent that he had a number seeking information he was unable to supply, and have worked to the best of my ability in carrying out the various schemes for promoting the emigration of the right classes.

Your obedient servant,

M. McINTYRE,
Canadian Government Emigration Agent.

No. 6.

REPORT OF E. O'KELLY.

44 DAWSON STREET,
DUBLIN, March 30, 1912.

The Assistant Superintendent of Emigration,
London.

SIR,—I beg to submit my report for the fiscal year ending March 31, 1912.

My work varies little from one year to another; so much of it being the routine of attending to correspondence and callers at office, visiting steamship agents, urging them to greater attention to their booking business, keeping them posted in any change likely to help them, and reporting to London on the condition of each agency so visited. I keep the agents well supplied with copies of our official publications; and in the past year the department supplied specimens of grain in the straw, and grasses neatly placed on boards to those agents who could show them to advantage. I consider this visiting of steamship agents a very important part of the duty of the Canadian government agent.

During the agricultural show season I attended a number of such shows with an attractive exhibit of Canadian products, and a supply of literature for visitors. At those shows, I can truly say, the Canadian stand was in almost every case the best patronized by the public, whose questions every succeeding year show their increased interest in, and knowledge of the Dominion. At all the shows attended by me in the past year I was most ably assisted by Mr. S. R. Hosford of Edmonton, who emigrated from county Cork a few years ago, and afterwards induced his father to sell his valuable farm in that county, and settle with his family in Alberta. This fact gave considerable weight to Mr. Hosford's statement in favour of farming life in the Dominion. Mr. Hosford worked in my district from the beginning of March, 1911, to end of August, attending stock fairs and country town markets, where the farmers gather in large numbers, talked Canada to them, and gave them copies of our literature with which I had him always well supplied. I found Mr. Hosford a very successful delegate, partly, no doubt, because of his knowledge of the country he was working in, as well as his knowledge of the country he was working for.

I have also had the services of delegates J. O. McConnell and William Lawson, both capable men, but their time with me has been too limited and too close to date of this report for me to judge with any accuracy of their success.

Our standard advertisement is appearing in fifty newspapers published and circulating in my district, and brings a large proportion of the callers and correspondence that come to this office. Copies of cablegrams from the Minister to Lord Strathcona dealing with current events in Canada reach this office every week, and are displayed in office windows, where they attract a good deal of attention and enquiry in the office. Politics still holding the attention of the people in the Midlands and South of Ireland to the exclusion of almost every other subject, our lantern slides have only been used five times at lectures; one of which was given by delegate McConnell in the county Dublin.

The number that left for Canada in the past year exceeded that of the previous year, and represented a more substantial class. Emigration to Canada from the South and West of Ireland suffers greatly by reason of the poverty of the people in the rural districts, which causes many to avail themselves of the free and assisted passages to Australasia who would, with like facilities, go to Canada. The United States also benefits immensely by having direct communication with Queenstown, county Cork, and advertising that fact at all the railway stations south of Dublin. The ports in Ireland at which Canadian liners call are Belfast and Londonderry, both situated in the north, so that emigrants for Canada have either to cross to England to embark, or take a long and expensive rail journey to those ports.

As long as Ireland continues to be a large producer of the human race emigration must take place, as the various Land Acts passed since 1881 for the benefit of tenant farmers large and small, prohibit the sub-division of the farms held under those acts.

	Number.
Number of letters received	4,182
Number of letters written	4,759
Number of callers at office	2,521
Number of atlases with circular letters to teachers	2,320
Number of wall maps to teachers	629
Number of atlases to pupils on application	1,886

Number of deports dealt with	8
Number of booking agents reported on	122
Number of shows attended	11

Viz.:—

Cork spring show, April 4 and 5.
Cork summer show, June 7 and 8.
Bandon show, County Cork, June 15.
Clonakilty show, County Cork, June 27.
Kilkenny show, July 4.
Waterford show, July 19 and 20.
Lismore show, County Waterford, July 26.
Carlow show, August 1.
Clonmel show, County Tipperary, August 3 and 4.
Tipperary show, August 9 and 10.
Athy show, County Kildare, August 15.

Your obedient servant,

EDWARD O'KELLY,
Canadian Government Agent.

No. 7.

REPORT OF JOHN WEBSTER.

17 and 19 Victoria Street,
Belfast, April 1, 1912.

J. Obed Smith, Esq.,
Assistant Superintendent of Emigration,
London.

Sir,—I beg to submit my annual report for the year ending March 31, 1912:—

My time has been occupied with official duties; visiting steamship agents at their offices; making exhibit of Canadian products at agricultural shows; lecturing during winter season; supervising the work of the travelling wagon; and arranging itineraries for the various farmer delegates under my direction.

	Number.
Callers at office	5,676
Letters received	3,798
Letters outgoing	6,069
Atlases distributed	2,800
School maps distributed	117
Bonus claims submitted, on 1,825 emigrants	1,641

I have called on the principal booking agents in my district, with a view to seeing what they are doing, and stimulating them to fresh efforts. In some small places I find two and sometimes three agents representing the same line, which is by no means an advantage.

The calling of some of the Canadian Pacific steamers at Belfast, is much taken advantage of. By the last ship at Belfast, on March 15—an early sailing—212 left from my district. The next boat will secure a very large number. The fine ships of the Allan line, calling at Moville, take a fair percentage of North of Ireland emigrants. As, however, the best ships do not call at Ireland many of our emigrants make Liverpool their port for departure.

At important agricultural shows, we make display of Canadian products. At these fixtures we find a good opportunity to meet farmers and farm labourers, and discuss with them the opportunity which Canada offers, should they decide to emigrate. The shows attended were:—

Royal Ulster show, May 24, 25 and 26.
Portadown, June 1.
Dungannon, June 7.
Antrim, June 9.
Coleraine, June 13.
Newtownards, June 15.
Londonderry, July 4 and 5.
Ballymoney, July 18.
Cookstown, August 31.

For these shows I would respectfully suggest that we should be supplied with more varying material than has heretofore been the case. In addition to grasses and grains, samples of birds, fish, small animals, timber, minerals, and fruit, would be of great advantage. These, after the shows, would make a continual display in our office windows. Ulster being the hub of the linen industry, flax in straw is an exhibit which is examined with great interest by farmers. If the straw is short, it comes in for severe criticism. Let the flax be as long in the fibre as possible.

During the winter I delivered fourteen illustrated lectures. Without a doubt, lecturing is a fine medium towards spreading the light. The slides at our disposal, have been lent for fifteen occasions.

The exhibition wagon, in charge of Mr. Geo. Robinson, has accomplished good work, it being kept steadily on the road during the open season. Through its medium a useful and extensive distribution of our literature is made amongst agriculturists, its itinerary being arranged so that, almost daily, it visits a town or village in which is being held the weekly market or monthly fair, where of course, the farmers assemble in large numbers.

Last spring, on instruction from the department, our Mr. John Mullan visited Canada, where he spent 9 weeks; the information he acquired, as a result of the trip, has very materially added to his value in my office.

Amongst the press editors who last summer accepted an invitation from the department to visit Canada, were Mr. H. R. H. Baird, and Mr. T. Moles, proprietor and editor respectively of the *Belfast Evening Telegraph.* Since their return home, long illustrated articles dealing with each province have, at intervals of a week, been appearing in their papers, they were most interesting and well put together, and owing to wide circulation of the paper, attracted a great deal of attention.

During the last couple of months, several farmer delegates have been placed under my direction. For them I have arranged itineraries where I considered they could accomplish the best results. At present I have two delegates and am about arranging work for two others, who have been advised to me.

It is a satisfaction that, notwithstanding the aggressive policy of the Australian government, and that there is a considerable falling off in Irish emigration to the United States, we can report a steady annual improvement in the movement from Ireland to the Dominion.

Your obedient servant,

JOHN WEBSTER.

No. 8.

REPORT OF J. K. MILLAR.

139 Corporation Street,
Birmingham, March 30, 1912.

J. Obed Smith, Esq.,
Assistant Superintendent of Emigration,
London.

Sir,—I have the honour to submit report of the work of this agency for the year ending March 31, 1912.

It was on July 13 that I arrived in Birmingham and took charge, succeeding Mr. G. H. Mitchell.

I am pleased to report that there has been a large emigration to the Dominion from this agency during the past year. I was afraid that it would be a difficult matter to reach the record of 1911, when bonus claims on 2,264 people were forwarded to Ottawa, an increase of over 100 per cent upon the figures of 1910, but I find for the year just ended that bonus claims on 2,269 people have been forwarded to Ottawa, being a small increase of 5 over the previous year.

I consider this a good showing as the governments of Australia and New Zealand conducted a very energetic campaign in England last year for the purpose of turning the flow of emigration to their shores, and a large number of a very desirable class emigrated to Australia and New Zealand through their efforts. Almost every booking agent I have called upon has the same story about the many enquiries they have had about conditions in Australia, and the numbers they have booked. Many people in England have an idea that the winter in Canada is so severe that it is hardly possible to exist, and I consider that fact has a great deal to do with the question of whether they will go to Canada or Australia. Another inducement has been the assisted and nominated passages—for a time an emigrant could get to Western Australia by paying £2.

The class of emigrant that has gone to Canada this year from this district has been of a very desirable kind, and I am sure will do well in the land of their adoption.

During the past year I attended the principal agricultural shows in my district with my stand, and at each place large numbers of people came and inspected our exhibit, and made enquiries about conditions in the various provinces of the Dominion. The shows attended were:—

Leek.
Warwickshire.
Welsh National.
Derbyshire.
Leicestershire.
Staffordshire.
Shropshire and West Midland.
Northamptonshire.

The following one-day shows were also attended:—

Loughborough.
Oswestry.
Market Drayton.
Ashby-de-la-Zouche.

There was a large quantity of literature distributed at these shows. At many of the before-mentioned shows the Commonwealth of Australia had a splendid exhibit of all the products that are grown in the various parts, and I am sorry to state that my exhibit did not compare at all favourably with it. My exhibit, although very good (as-far as it went) consisted only of the various kinds of grain (both in bulk and straw), and grasses grown in the Dominion. Many of my visitors asked if Canada only grew grain, and mentioned that Australia must be a better country to go to as from the display at their stand they grew almost everything.

During the past year I gave, assisted by Messrs. A. O'Kelly, F. Chapman, and F. Campbell, from the London Office, 97 lectures throughout this district. These were given principally in the rural parts, and were without exception well attended, and much interest was manifested in the various views of Canadian life. In addition to the above-mentioned, several steamship companies gave a number of lectures in this district, and I supplied a set of lantern slides to many private parties who were giving a lecture on Canada.

I had the services of several farmer delegates during the past winter, and they were kept employed visiting the different booking agents, and giving advice and information to intending emigrants. The delegates allotted to me were good men, and did good work. I received many letters from booking agents stating how well they were pleased with the delegate's visit, and the business that resulted.

There has been a large amount of money invested in Canadian securities, land, &c., by people in this district during the past year. At the present time I know of a Birmingham gentleman who is in Canada representing a syndicate for the purpose of investing money in town property, and generally looking into the prospects Canada offers to the investor. If his report is favourable a large amount of Birmingham capital will be invested in the Dominion.

My time has been fully occupied attending to the correspondence of my office, personally interviewing parties, and calling upon the booking agents in my district. The number of communications received during the year was 10,028, those sent out 6,700, and the callers 6,876. The number of letters, &c., received, and sent, is not so large as last year, but the number of callers increased by 881.

Your obedient servant,

JAMES K. MILLAR,
Canadian Government Emigration Agent.

No. 9.

REPORT OF JOHN McLENNAN.

48 Lord Street, Liverpool,
March 30, 1912.

J. Obed Smith, Esq.,
Assistant Superintendent of Emigration,
London.

Sir,—I have the honour to submit the annual report of the Liverpool Office for the year ending this date.

The year's work has resulted in perhaps the largest emigration in the history of the district, but being the first year of my work here, I am not able, personally, to make comparisons, except as the same may be gathered from reports on file, and also from reports from steamship companies and their agents. I am of the opinion, however, that in addition to the increased number, the restrictions have resulted in materially improving the quality of the people going to Canada.

I have followed the practice that has been in vogue for many years in having an exhibit at the leading agricultural fairs throughout the territory during the summer months, and lecturing in winter. A large volume of correspondence has been attended to from the office, replying to enquiries that have come from various sections.

The strenuous efforts of the various states of the Australian Commonwealth are beginning to bear fruit, and they are now formidable competitors in our work. As has been referred to in my previous reports, the free and assisted passages offered by some of the States, are of such a character that it is impossible for us to compete with them. Besides this, some of the States notably Victoria are offering land on very favourable terms and advancing, from State funds, large sums of money which will enable men with very limited capital to begin operations on an extensive scale. Whether these measures will have beneficial results must remain for the future to determine, yet the offer is so generous that it would not be wise for any of our governments to make similar propositions, and they are exceedingly tempting to the prospective settler.

Besides the large numbers who are attracted to Southern Pacific Dominions, we are now draining heavily upon the source of supply. Agricultural labourers are getting exceedingly scarce, and the last census shows that the population of practically every agricultural section in the Kingdom has diminished in the past decade. It is also reported in large industrial centres that factories and mills have some difficulty in getting all the competent help that they require here. These facts inevitably lead to the conclusion that we cannot hope to maintain the large figures of emigration attained in the past year. If we are to successfully cope with the Australian States we must use, not only the measures that have been successful in the past 10 or 12 years, but, in my judgment, must introduce some new measures.

I am glad to see that the governments of several of the provinces are taking active measures to give settlers better opportunities within their borders, and I confidently expect good results to follow such measures.

	Number.
Communications received	21,138
Communications sent	19,758
Claims for bonus received	3,300
Callers at the office *re* Emigration	6,091

Your obedient servant,

JOHN McLENNAN.
Canadian Government Emigration Agent.

No. 10.

REPORT OF L. BURNETT.

16 Parliament Street,
York, March 30, 1912.

J. Obed Smith, Esq.,
Assistant Superintendent of Emigration,
London.

Sir,—I have the honour to submit my report for this district for the year ending March 31, 1912, and in doing so I may say that the interest taken in Canada and the emigration thereto of the agricultural class, is increasing very rapidly, and I have every reason to believe that it will increase still more in time to come.

Although other fields are open for the class of emigrant Canada requires, it is needless to say that Canada offers the best opportunities to the man or woman who is desirous of succeeding. The depression in trade in this country is compelling the person who wishes to succeed to seek other markets for his, or her, labour, and Canada being Britain's nearest Dominion, they naturally give preference to her and listen to Canada's call before that of the more distant Dominions.

Whole families are continually leaving for the 'Golden West'—some of them ranging from six to fourteen in number.

All the leading agricultural shows, markets and fairs in this district have been visited as in previous years, and there has been a great increase in the inquiries made at the different places regarding Canada. Lectures have been given throughout the district by farmer delegates and myself, and the interest taken in them has been far greater than hitherto. Farmer delegates have also visited the principal centres to give advice to the intending emigrant and in several cases application has been made for the visit to be extended.

Applications from people who have not sufficient money to pay their passages are innumerable, but a good many have taken advantage of the offer of assistance from the various provincial governments. It is again pleasing to note that a great many people who have been in Canada, have visited this district during the winter months, and the impression left by them on their friends, has been the means of many others going, although there are many who do not realize that Canada offers them a far better opportunity than they may hope to find here.

There has again been a steady increase in the business at the office, and the demand for literature is increasing rapidly—every effort being made to get it distributed amongst the agricultural classes.

Your obedient servant,

L. BURNETT,
Canadian Government Emigration Agent.

No. 11.

REPORT OF D. TREAU DE CŒLI.

ANTWERP, April 1, 1912.

J. OBED SMITH, Esq.,
Assistant Superintendent of Emigration,
London.

SIR,—I have the honour to submit my report for the fiscal year, ending March 31, 1912.

I am pleased to state that the result of this year's propaganda work will be even more encouraging than last year's and that I have every reason to believe that the experimental stage of the immigration into Canada, for Belgians and Dutch has passed and that the conviction of success, based upon proofs, has taken the place of doubts and distrust of former years. Not a single emigrant of Belgium or Holland, has anything but words of praise for Canada, and words of encouragement addressed to their countrymen, to come and rejoin them in our country.

This good news is communicated monthly to my correspondents and to others, through the medium of the little French monthly, *Le Canada Occidental,* and the Flemish translation, *West Canada,* and is much appreciated by the readers.

The interest taken by Belgian school teachers in everything concerning Canada does not abate, and I see that the schools of adults in the farming communities are amply provided with atlases and wall maps and a judicious use is made of these, also of lectures with lantern and views, in order to bring Canada before the public as it is, with the advantages it offers to any person who will devote himself to agriculture.

I shall make here special mention of a pamphlet issued by the Belgian government, for the information of those who intend to emigrate to Canada. This pamphlet corroborates the official literature of the Department of the Interior of Canada, it is printed in the French and the Flemish languages, and distributed to all Belgian applicants.

Three of the principal commercial high schools (of Liège, Mons, and Louvain) have demanded from their students an essay on Canada (agriculture, industry and commerce). The best of these essays will be published in reviews and educational periodicals. Numerous demands for literature, statistics and information have been made, which I furnished as complete as possible.

I have given this winter only twelve lectures, as there has been a continual demand for the loan of lantern and views, which I readily send with the synopsis of a lecture, as generally given by myself.

Although not compulsory, I have impressed upon every one intending to go to Canada that it is necessary to have a certificate of the municipal authority, certifying to his good character and conduct. I make it a condition to obtain an introductory letter to the government agents in Canada. I attribute to this, and to the trustworthy information I always give them, the almost total absence of any undesirable Belgians, amongst those who passed through my office. I think it my duty, at the time when emigration tends to become more and more numerous, to endeavour to obtain quality in preference to quantity.

I may state that the Belgian emigration has been very satisfactory, which is amply proved by the fact that a large number of well to do farmers have left with their families and sufficient capital to settle at once on a farm, but I dare say that the Dutch emigration presents itself under still better aspects.

With an outlay of not more than one-fifth of the total annual expenditure of this office, and about one-fifth of my time devoted to propaganda in Holland, the number of Dutch emigrants was for the year 1910-11 about 50 per cent of the total number of the Belgians.

This, though, might be accounted for by the difference of character of both people; while Belgians emigrate only after conviction that it is to their advantage to do so, Dutch or Hollanders are ready to run their chance, and have more self-confidence.

Another reason might also be mentioned, Holland is essentially an agricultural country, Belgium has a very large proportion of its population employed at industrial enterprises.

If I can obtain a large number of Dutch atlases, I shall do for Holland what I have done for Belgium, namely: provide the teachers, upon demand, with the necessary material to study the geography of Canada, and I am sure that the result would be satisfactory.

During the fiscal year 1911-12, I received 5,125 letters, of which 4,090 called for an answer.

This correspondence might be classed as follows: 502 English letters, 2,110 from French-Belgians, 1,411 Flemish-Belgians, 902 Dutch and 190 German and Swiss. One thousand four hundred and eighty-one visitors presented themselves at the office for information while I met as large a number at my lectures and appointed meetings.

Your obedient servant,

D. TREAU DE CŒLI,

Canadian Information Agent.

No. 12.

REPORT OF PAUL WIALLARD.

3, RUE DE L'ISLAY, PARIS,
April 1, 1912.

To the Superintendent of Immigration,
Ottawa.

SIR,—I have the honour to present to you my report for the fiscal year closing March 31.

Our correspondence this year has risen to a total, requests and replies, of 19,850 letters.

The number of visits has been 2,350.

We advertised as usual in three of the principal newspapers of France, those which have elsewhere the greatest issue; but the kind of advertisement that we have made is limited to giving our change of address as an information office of the Canadian government at Paris, certain that all those that have need of information as to our country will not fail to profit by the opportunity of applying to us. In fact, since our departure from the rue de Rome address, where we had been so long, the public had lost trace of us and it was necessary to let them know our new address.

Further, as Canada is becoming more and more known in France, we are able to see from the letters that have been addressed to us that those who wish to emigrate are in general very well informed as to the advantages offered by Canada.

I am happy to say that the total of the French emigration for 1911-12 has been perceptibly higher than that of the preceding year, and I have not the least doubt that the present season will be marked by still more satisfactory results.

We are using all legitimate means to make Canada known over here in all its aspects, geographical, historical and economic. We have given this year about five hundred lantern lectures, in places where the knowledge of our country was not as yet sufficiently established, and I am looking forward to an extension of this work. The pictures shown in connection with these lecture exhibit the beauties of our country; our superb rivers, immense lakes, magnificent forests, luxuriant vegetation, our imposing mountains, and our fertile plains, the prairie covered with wheatfields, which are the admiration of all the world. The organization of these lectures kept us well occupied all winter. It has enabled us to distribute about 20,000 atlases and 1,500 wall maps, which, for the most part, are placed on the walls of public schools.

We have had, as in years past, to reply to a number of inquiries coming to us from Luxembourg, Switzerland and the north of Italy, as well as to a great number of persons who, though of foreign nationality, live in France and wish to go to Canada. Among these are many Belgians.

The standard of the classes going to Canada is much higher than it was before, thanks to the measures prescribed by the department and which permit of a better selection being made. In all cases, we make it a duty to discourage those who would not be in a favourable condition to succeed in our country, eliminating the persons belonging to trades or to professions which would render them liable to difficulties in finding work. By acting thus, we are certain to render them a service and we believe that we hold to the spirit as well as to the letter of the laws that govern the question of emigration in France.

The Allan Company has as usual given us an excellent service during the whole year and we learn with pleasure that the General Transatlantic Company inaugurates this season a monthly service which will form another useful link between our country and France.

Your obedient servant,

PAUL WIALLARD.

OPERATIONS IN THE UNITED STATES.

REPORT OF THE INSPECTOR OF UNITED STATES AGENCIES AND PRESS AGENT.

The Superintendent of Immigration,
Ottawa.

SIR,—One hundred and thirty-three thousand, seven hundred and ten, are the figures given as the number of persons from the United States in 1911-12 who have declared their intention of becoming residents of Canada. The wealth taken by these people into the country, which might approximately be placed at 133 million dollars, by no means represents the wealth added to the nation. These people are of a high standard. Most of them have been raised in the rural districts of the several states in which our agents are operating, and have brought with them the high ideals of citizenship, of integrity, honesty and industry that have been instilled into them through generations of a hard-working, honest and industrious ancestry. They have assisted in tilling the farms of their own prairie states, and in moving to Canada, where farming conditions are similar, they lose no time in introducing the methods they have found so successful in their home country. It is probably for this reason, or partly so, that in the work in the United States, there are practically no reports sent back of failure. They have become possessed of a soil that responds as readily as any soil they had ever cultivated, and with crops that repay them away beyond any of their previous experience, and with a climate that is invigorating and healthy, they are appreciative. The reports sent back to their friends are always optimistic. If those who may be interested in other parts, invent and circulate derogatory reports, they are among the first to send out a disclaimer. The fact that those who have gone, some to spy out the land, others to live upon it and work it, send back to their friends truthful reports, is a factor in the large increase shown year after year.

The prospects for the year 1912-13 are as bright as any in my experience. The correspondence at the various offices is growing rapidly, and it has become so large in some of the offices that extra assistance has to be secured. The number of interviews has also greatly increased over last year, and judging from all sources of information available, I feel I am safe in the prediction that the incoming fiscal year will show a considerable percentage over the past.

Most of the American settlers are those of mixed nationalities, Germans and Scandinavians going forward in large numbers. A great many of those comprised in the American immigration are Canadians, who have been farming in the United States for some years and have done well, yet they want to take their share in the upbuilding of the Empire to the north, which still has in their hearts the sympathy of home ties and affiliations. There are also those of British descent. There are none of the class who will not make good citizens, none of the undesirable, none who will not make for law and order, and be careful in their observance. The quality of the American emigration to Canada has been commented upon in the most favourable way by prominent statesmen of the United States and by high-class newspapers and magazines. Reasonably, there is a feeling in some places across the line that it would be well to keep these people from moving to Canada. In order to check the movement various means have been resorted to. Banks have attempted to curtail borrowing privileges, large land companies with holdings that have been in their possession for years, have used every means to exploit them and attract the buyer. In this way much has been heard of the Florida Everglade, of the Texas plains, the New Mexico irrigated tracts, the Arizona plateau, the Colorado valleys and hillsides, the United States reclamation tracts in various of the western and coast states. Many of these have a good deal of merit, and doubtless have diverted some attention from Canada; yet, with the great hunger for land, evident everywhere, from the man behind the counter who will tell you of the day he worked on the farm, to the man teaming in the city, who knows all about horses and those on the over-populated 100 acre farm, it is found that the back-on-the-land educational propaganda is meeting with success. Soon all lands that are capable of producing will be in demand, and it will then be the 'survival of the fittest'; the land that proves best will be the greatest attraction.

During the past year, the same methods of bringing Canada to the attention of the clientele in the United States that have been used so successfully in the past, were again pursued, such as advertising in the farm and country papers, personal talks by the agents with the prospective settler, the placing of exhibits at various county and state fairs, arranging for parties of editorial writers, &c.

The agents in the field have been very active in the work, and it is pleasing to be able to record my appreciation of the splendid results that have followed their campaign.

Some changes have taken place in the staff during the year. It is with regret I have to speak of the death of Mr. E. T. Holmes, who for years occupied the position of agent at St. Paul, and in that capacity did splendid work for the department. Mr. R. A. Garrett, of Manitou, Manitoba, is his successor.

Additions to the staff have been made. Mr. F. H. Hewitt, of Findlay, Manitoba, has been appointed in charge of the work in Iowa, Mr. W. E. Black has opened an office in Crookston, Minn., and will have charge of the work in the northern part of that state. Mr. T. Conley has been sent temporarily to assist in the Spokane office. Mr. Jas. Maw will have charge of an office in Harrisburg, Pa. In November last, the office at Boston was closed, and the staff relieved of their duties. It was apparent in January, 1912, that there was enough work in sight, to warrant the re-opening of the office. It was decided to place Mr. Max. A. Bowlby in charge. He is well acquainted with conditions in the Maritime provinces, and will do considerable towards the repatriation of this splendid class of people. He will also take care of the interests of the western portions of the Dominion. It will be necessary to have an assistant for him.

An office has been opened at Manchester, N.H., with J. A. Laferrière in charge, who will look after repatriation of French Canadians.

Mr. J. R. Hood, of Oak Lake, was in the field early to assist in the work in Kansas, Missouri and Oklahoma; Mr. J. L. Newman, of Pigeon Lake, Manitoba, was appointed as temporary assistant to Mr. Geo. A. Hall, of Milwaukee.

The interests of the German and Scandinavian work are being carefully watched, Mr. Cleven having been appointed to visit the several Scandinavian communities in the United States to set out the advantages that western Canada offers to that class of settler.

Your obedient servant,

W. J. WHITE.

OPERATIONS IN WESTERN CANADA.

REPORT OF THE COMMISSIONER OF IMMIGRATION.

WINNIPEG, MANITOBA, May 8, 1912.

The Superintendent of Immigration,
Ottawa.

SIR,—I beg to submit the report of the Winnipeg office, and the western offices reporting thereto, for the financial year ending March 31, 1912.

STEADY STREAM OF IMMIGRANTS.

I am glad to be able to report that the stream of immigration into this western country has continued during the past year with unabated vigour, and the aggregate volume shows a marked increase over the immigration of the preceding year.

MANY BRITISH.

Again I am glad to be able to report a very noticeable increase in the proportion of British immigrants settling in the Prairie provinces.

GOOD QUALITY.

The gratifying improvement in the quality and wealth of the immigrants referred to in the previous year has been continued through the past year, and I think I am entirely within the mark in saying of the whole stream of immigration to the west that both in quantity and in quality it far surpasses anything hitherto known in the history of immigration to Canada.

INFLUENCE OF FRIENDS.

While the general work of this branch is greatly increased by the increasing volume of immigration, one cannot but notice that consequent with the improvement in the quality of the immigrants is a disposition to independent action and a desire to arrange settlement for themselves without depending upon any extraneous aid either from this department or any other organization. I am also glad to note that the policy of the department in encouraging satisfactory settlers to communicate with their relatives in the old country is having a very marked and agreeable effect, inasmuch as an ever largely increasing proportion of the immigration is destined to relatives and connections and is coming to the country with fixed ideas both as to location and occupation.

MORE FAMILIES COME.

It is with great satisfaction that I notice the increasing number of families which are coming. The practice of the husband to leave the family behind and make his way in Canada alone for a time is falling into disuse, and the progressive and enterprising immigrant is showing such confidence in the country and in himself that he is hesitating less and less to bring his family and all his belongings with him, and thus set up home in the new country as quickly and as completely as possible. This has a distinct advantage inasmuch as the old practice of halving the cherry, i.e., dividing the income between maintenance here and the maintenance of the family at home, is no longer in vogue.

USING HALLS.

The new settler continues to take generous advantage of the immigration facilities provided at Winnipeg and at 35 or 40 other points in the west. As many as one thousand persons have been provided with accommodation in one night at the Winnipeg halls during the very busy part of the season, and throughout the spring and early summer months an average of from five to six hundred have been given accommodation, either prior to settlement in this city, or while awaiting train connections for remote destinations west and north-west of Winnipeg.

SENDING WESTWARD.

The work of disposing of the vast numbers of immigrants arriving at this point is one of ever increasing care and responsibility. It is not an uncommon thing in the summer for as many as 1,000 to 1,500 new settlers to detrain at this city in one day. The work of sorting them out for their various trains and destinations, rechecking their baggage, directing as to proper trains, and providing accurate and satisfactory information, entails a great deal of hard work and has, I think, been carried out very successfully.

THE LABOUR BUREAU.

For those who remain in the city to become residents, or who remain here for the purpose of obtaining employment in the western provinces, the Labour Department of this office does very effective work. Happily, the labour conditions are such that there is no difficulty whatever in finding instant employment at agricultural work for either experienced or inexperienced men, while female labour, either as domestics or housekeepers, is never within 50 per cent of its active demand. The department, as you are aware, takes no part whatever in finding employment for skilled labour, but for the unskilled labourer who is anxious for employment at agricultural work, as well as at railway construction, the Labour Bureau of this office arranges immediate employment. During the past year the applications for experienced help received at this office numbered 17,716, while we were able to place only 11,189, being a shortage as you will notice of something over 6,000 persons, while the figures for inexperienced labour are equally large and the proportion of filled places approximately the same. The increased area being brought under cultivation has made of course a corresponding demand for increased labour, with a consequent increase in wages, and last summer and this spring hundreds of farmers have been offering $35 to $40 per month for eight months, together with board and lodgings for experienced men; while inexperienced men are snapped up at from $10 to $15 per month and board and lodgings for the twelve month period.

PRAIRIE IMMIGRATION HALLS.

In the country districts the new-comers are cared for by 40 immigration halls scattered throughout Saskatchewan and Alberta. In these halls the new-comer is received and provided with accommodation, light and fuel and permitted to remain there until he has had every reasonable means of making a settlement upon the land. While there is officially a fixed period of residence in an immigration hall, at the same time practical caretakers of these buildings see to it that if the new-comer is making an honest effort to settle, no stated limit of residenre is imposed upon him.

TOWNSHIPS THROWN OPEN.

A considerable number of new townships have been thrown open for homesteading in the northern parts of Saskatchewan and Alberta. Many of these townships are situated north of the main line of the Canadian Northern Railway west and north-west of the Battleford district. These splendid lands have been very attractive and more than a thousand homesteads have been taken up in this district alone within the past three months.

CLAIMS OF MANITOBA.

Greater attention has been drawn to the deserving claims of Manitoba as a home for the progressive and enterprising homesteader. There has been some measure of active co-operation inaugurated between the Dominion and the provincial officers, and the result has been that a considerable amount of attention has been directed to the very desirable land, desirable in every respect, but more particularly in respect of mixed farming in that great and rich region of country throughout the Dauphin and Winnipeg land districts. While it is true that much of this land is timbered, it is equally true that much of it is fit for immediate cultivation and that almost all of it is extremely rich in those qualities that are best suited for a system of mixed farming, and in these days when the doctrine of mixed farming is being brought more prominently before the public attention, it would appear that the claims of Manitoba, possessing large areas of this kind of land, must immediately command public notice.

Along the Grand Trunk Pacific Railway east of Winnipeg are several hundreds of splendid homesteads fitted for mixed farming and it is gratifying to note that the efforts of the department, in co-operation with the Manitoba Immigration Department, to draw the attention of the Norwegian settlers in the north-west provinces of the United States, are having a marked success and are likely to result in a very valuable and important movement towards these somewhat neglected but invaluable lands in the eastern and northern parts of the province of Manitoba.

EXTENSION OF BOUNDARIES.

The extension of the boundaries of Manitoba northward to the Hudson Bay will bring immediately within the scope of our work an increased and invaluable area for settlement, and I have no doubt that the great richness of that country in fisheries, minerals, and timber must inevitably result in drawing a vast amount of capital and a large number of people to its development and subsequent settlement.

RAILWAY CONSTRUCTION.

Railway construction in the western provinces makes amazing progress, and yet I regret to say that it seems entirely unable to keep up with the settlement movement. In the provinces of Saskatchewan and Alberta alone, the three great railway companies operating in the West have under construction about two thousand miles of main and branch lines. This great work of railroad construction gives employment not only to a vast army of labourers, but it is opening up new and wide territories that must in a short space of time add immensely to the productive power of these prairie provinces. It is calculated that at least 20,000 men will be employed at this work in Manitoba, Saskatchewan, and Alberta, during the ensuing summer, and that much of this work will be continued on through the succeeding winter. As I have said, notwithstanding this rapid railway development, settlement pushes out far ahead of the line of steel, and wherever the railroad goes it finds the farmer with his crop awaiting its approach and ready with his demands for cars and railroad facilities. That these conditions are likely to be continued in the future goes without saying. The great difficulty experienced by the railroads in handling last year's crop will, notwithstanding this great railway development, be further accentuated in the near future. The thousands of new settlers the Immigration Department is placing upon the land are making themselves felt in the new areas constantly being brought under cultivation.

NEW ACREAGE UNDER CULTIVATION.

In the province of Manitoba in the present year 233,068 acres of spring breaking are being placed under wheat for the first time. The area under wheat in Alberta will average about the same as last year, but in Saskatchewan 2,300,000 acres of new land will bear its first crop this year. While it is true that the climatic conditions of last year retarded fall ploughing both in Manitoba and in Saskatchewan, at the same time it is of interest to note that this year 964,100 acres of summer fallow will be placed in crop in Manitoba and 2,188,118 acres of summer fallow have been placed under crop in Saskatchewan this year. You will see then from these figures what is meant when I draw your attention to the still inadequate efforts to provide railway accommodation for the vastly increasing crops of the western prairies.

SETTLERS FROM STATES.

The volume of immigration from the United States both in quality and quantity continues to be most satisfactory. There has been an important increase in the numbers during the months of January, February and March of this year, and this increase would appear likely of sustainment during the balance of the immigration season. The success that has attended the American settlers is drawing a great deal of attention in the United States with the result of not only an increase in the actual settlers from month to month, but also in drawing to this country a great deal of American capital and a large number of American investors. The hotels and trains of the West at the present time are filled with men bringing capital from the United States and seeking openings for its investment in the West.

SETTLERS WINTERED WELL.

I am glad to say that during the past year, notwithstanding the difficulty of handling the crop and the rather inclement weather of the harvest season, the amount of distress has been not only less than in former years, but comparatively insignificant. There has been no serious suffering of any kind; the weather was fairly mild; the snow-fall was normal. The wet fall brought richness of verdure and consequently plenty of food for stock. As a consequence, the new settler has wintered well and enters upon his spring work with hope and confidence.

BOUNDARY INSPECTION.

The work of boundary inspection between Port Arthur and the western slope of the Rocky Mountains, which is under the direction of this office, continues to be a most important part of our work. The name and fame of Canada, with the stories of its richness and its opportunities, attract the undesirable as well as the desirable, and the duty is placed upon us of a nice and just discrimination between the people whom we want, and those whose coming to us would be a distinct misfortune. In the mountains of British Columbia particularly this duty is attended with a great deal of labour and hardship. The great mountain passes provide ready means for the undesirable to 'beat' his way into the country without legal admittance. Fortunately, with the co-operation of the local police in the western districts and the constant and vigilant care of our officers, I have reason to believe that the influx of this undesirable element is reduced to a minimum, and that having regard to the total proportions of the season's tide of immigration the undesirables, physically, mentally and morally, form a trifling percentage of the whole.

SERVICES OF MOUNTED POLICE.

Again I have to express my obligations to the officers and members of the Royal North West Mounted Police for prompt and valuable service in emergency. In the remote districts particularly the police are the eyes and ears of the immigration branch, and have done much, and are doing much, to assist and promote the safe and satisfactory settlement of the new comers.

I have to express again my appreciation of the cordial co-operation of all the officers engaged in the immigration service in the West who are under the direction of this office. They recognize fully the great importance of the service in which they are engaged, and I have reason to repose the greatest confidence in their intelligence and their honest desire to meet, greet and assist the new settler in his settlement under the most favourable conditions.

Your obedient servant,

J. BRUCE WALKER,
Commissioner.

JUVENILE IMMIGRATION.

REPORT OF G. BOGUE SMART, CHIEF INSPECTOR OF BRITISH IMMIGRANT CHILDREN AND RECEIVING HOMES.

Department of the Interior,
Ottawa, March 31, 1912.

The Superintendent of Immigration,
Ottawa.

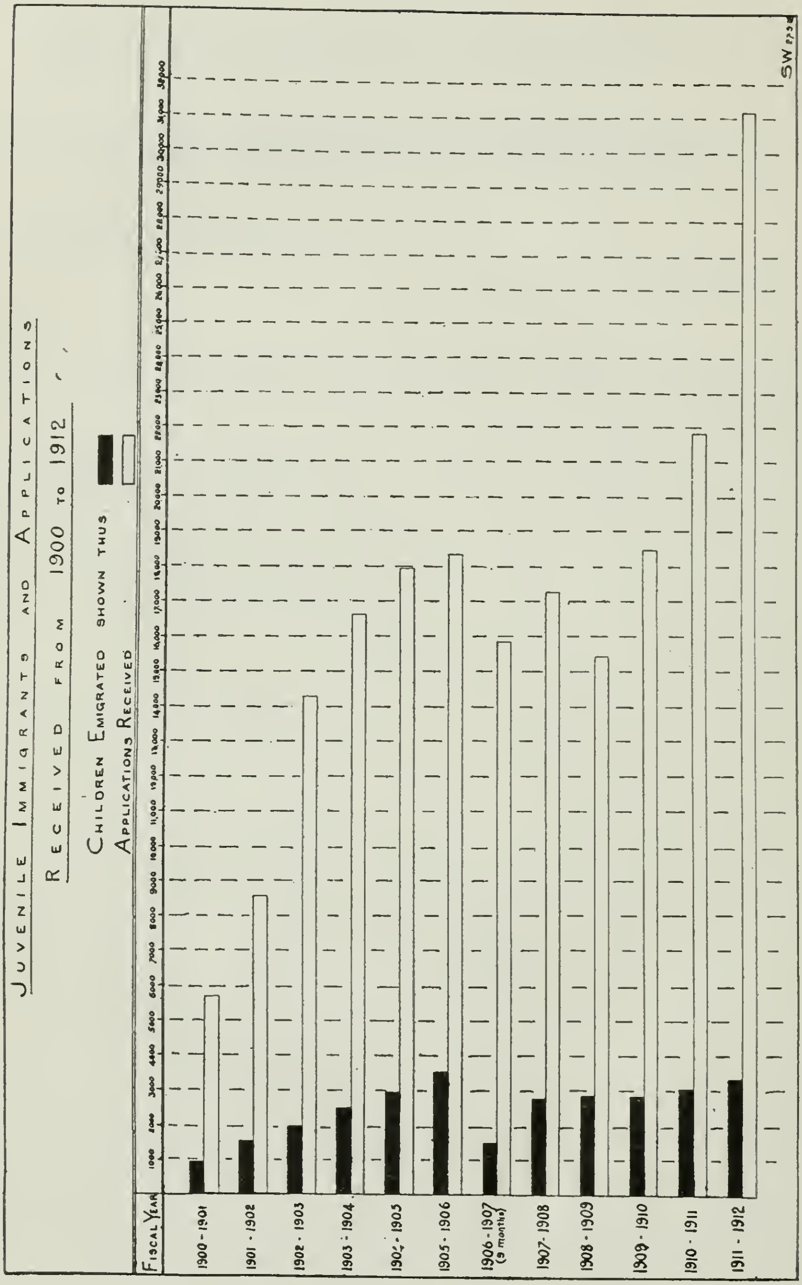
Sir,—I have the honour to submit my thirteenth annual report as Chief Inspector of British Immigrant Children and Receiving and Distributing Homes, this being for the fiscal year ending March 31, 1912.

The satisfactory result of the work of the various agencies during the past twelve months has been abundantly demonstrated. The type of the British juvenile immigrant has been desirable from the point of view of Canada's requirements. The children were almost immediately after their arrival at the Receiving and Distributing Homes despatched to foster homes and to situations arranged for the most part in advance of their emigration. These centres of reception and distribution are located in the provinces of Ontario, Quebec, Nova Scotia and Manitoba, and number eighteen in all. The various provinces receive, according to the openings offered, a fair number in the distribution of these youthful settlers.

The lofty aim and principles of the founders of this admirable movement have been respected and it affords me pleasure to report that the children have been, with few exceptions, desirably placed, and in houses and situations wherein they may reasonably be expected to develop habits of industry and become good, useful citizens of the Dominion. The average age of the children on their arrival in Canada is between twelve and thirteen years.

The children visited during the year have been found to be in the enjoyment of sound health and good physique, and these most satisfactory conditions are no doubt the outcome largely of the care and regard paid by the authorities to the hygienic surroundings of the children in the preparatory homes and schools in the old country. In many if not all of these splendidly equipped institutions the children are subjected to regular monthly medical examinations. On the occasion of my last visit to the old land I happened to be at one of the large poor law schools when the physician was putting the children through the test and found that the examination was both systematic and thorough. Later in the course of my inspection of the children I remarked to the Assistant Local Government Board Inspector who accompanied me, on the apparent splendid condition of the children's teeth, which I consequently learned was the result of the importance attached to health conditions in both the state and voluntary schools. Each child has its teeth examined by a dentist at least once every three months. In addition to these preventive measures there is another which I might term constructive, and which is included under the general term of gymnastic or calisthenic exercises. Apart from the good food and fresh air which the children receive, there is probably no other single factor regarded by the authorities so important in building up both the mental and physical health of the children as these physical exercises.

In nearly every home and training school in Great Britain visited during the past summer I was immensely impressed by the esprit de corps in the children and their


Juvenile Immigrants and Applications
Received from 1900 to 1912
Children Emigrated shown thus ■
Applications Received ☐
Fiscal Year
1900 - 1901
1901 - 1902
1902 - 1903
1903 - 1904
1904 - 1905
1905 - 1906
1906 - 1907 (9 months)
1907 - 1908
1908 - 1909
1909 - 1910
1910 - 1911
1911 - 1912
1000
2000
3000
4000
5000
6000
7000
8000
9000
10000
11,000
12,000
13,000
14,000
15,000
16,000
17,000
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22000
23,000
24,000
25,000
26,000
27,000
28,000
29,000
30,000
31,000
32,000
SW

superiors. It was evident that the object sought by teachers and officials was to impart to the children the foundation of a sound moral education, and as far as possible to eliminate the effects of 'institutionalism,' which one sometimes dislikes, not alone in the juvenile but frequently in the adult immigrant, i.e., the lack of a spirit of self reliance and initiative, a lack which so often hampers a young person in pushing his way in the world. This is by no means an easy task when one remembers the vast population of Great Britain and Ireland and the necessarily large number of children enrolled in the training homes and schools.

In the course of an interview with the late Arthur Chilton Thomas, a well known barrister of Liverpool, and an acknowledged authority on juvenile sociology, he stated in effect that in large schools the children have had so much done for them that they do not at first appreciate the necessity of work in order to earn their daily bread, but in a short time, when the situation has been made clear to them, they turn out much better than do the boys from their own homes, having had the advantage of the discipline and training of the school.

It is a cardinal feature of the work and one of general recognition by state and private organizations that individual attention is what counts most in the work of character building.

The Scattered and Village Homes and Boarding out System in Great Britain have been most successful, in that they have provided Canada's prospective young citizens with a thorough and comprehensive pre-emigration training.

A number of 'one time' British juvenile immigrants after completing their apprenticeship in eastern Canada have joined the rush to the far western provinces, where they have taken up government land, and become successful farmers. Many of the boys at the age of 17 or 18 years also go to western Canada as harvesters and take advantage of the midsummer excursions. Pleased with the conditions and prospects they remain in the West. Others have acquired land in the older provinces in their own right or become 'tenant farmers' and in the main are prosperous and contented.

The general increase of wages to deserving boys referred to in the reports of my assistant must prove encouraging to their well wishers, not only in the homeland but also in Canada.

The Reverend Dr. Gregory, of the National Children's Home and Orphanage, of London, corroborates my experience in a recent article where he says:—'In Canada the quick witted, energetic, active boy to whom farming might appear monotonous rapidly accepts his new conditions and settles down as if he had been born "a child of the soil."' The government of Canada has received from many sources similar gratifying reports concerning the progress of the British juvenile immigrant. Of 1,744 children inspected and reported upon during the past year 1,536 were found to be making very good progress and giving entire satisfaction to their employers and 179 were considered good or fair. Only 29 of this large total were pronounced unsatisfactory.

There has been a constant call for the services of these children, and almost exclusively from farmers, although many good openings in our towns and cities have been filled by girls, from 14 to 16 years of age, as house and nurse maids.

As has been frequently stated the absence of this annual source of supply would be felt acutely by the farming community. The services of these young immigrants on our farms have become in fact indispensable. There are many kinds of farm work which a boy can do quite as well as a man.

The accompanying chart sets forth in a striking manner the disparity between 'supply and demand,' and must be accepted as collateral proof of the acceptability of the services of our junior immigrants. It should be observed *en passant* that a large number of applicants for children were persons who for years have been regular clients of the various agencies.

The following statement shows the number of children emigrated by the principal agencies during the past fiscal year.

Society or Agency.	Children Emigrated.	Applications received for Children.
Dr. Barnardo's Homes, Toronto and Peterborough, Ontario, and Winnipeg, Man.	†971	23,060
Miss Macpherson, Stratford	220	1,096
Mr. J. W. C. Fegan, Toronto	99	450
Reverend Dr. A. E. Gregory, Hamilton	103	712
Reverend Robert Wallace, Marchmont, Belleville	68	697
Fairknowe Home (Mr. Quarrier's), Brockville	181	1,230
The Misses Smyly, Hespeler	38	298
Mrs. Birt, Knowlton	184	1,746
The Catholic Emigration Association	399	633
Church of England Waifs' and Strays' Society, Sherbrooke, P.Q.	73	115
Church of England Waifs' and Strays' Society, Niagara-on-the-Lake, Ont.	52	453
Mr. Middlemore, Halifax, N.S.	171	400
Salvation Army, Emigration Agency	24	125
Mrs. Wallis, Toronto	11	25
The Children's Aid Society of London, England	27	*a*
Self Help Emigration Society	47	
East End Emigration Fund	21	
	2,669	31,040

† 297 arrived 31st March, 1912, disembarked 1st April, 1912. *a* Not reported.

The British juvenile immigrant is like other boys, good, bad and indifferent in disposition, and it depends largely on how he is treated whether or not he will do well. With reference to the character and behaviour of the old country boy in Canada the reports speak well for their early training, for out of a total of 1,744 the number found to be very good was 1,557; good or fair 158 and unsatisfactory 29.

The children visited, with comparatively few exceptions, were found (1) well housed, (2) properly clad, and (3) reasonably remunerated for their labour. An equally gratifying result of the year's inspection is that such a small number were described as 'undesirable.' It is a very uncommon occurrence to find a juvenile immigrant in the 'arms of the law.' The generally satisfactory outcome of the work, I may repeat, may be credited to the following factors:—(*a*) probationary pre-emigration training, (*b*) careful selection, and (*c*) the maintaining in this country of a continuous supervision by those who must be responsible for the children until they reach, at least, the age of eighteen.

The following table shows the number of children emigrated by the principal societies and agencies during the past eleven years.

Agency.	Fiscal Year.											Total.
	1900-1	1901-2	1902-3	1903-4	1904-5	1905-6	1906-7	1907-8	1908-9	1909-1910	1910-1911	
Dr. Barnardo......	385	889	1,150	1,188	1,574	1,434	944	950	1,034	1,010	924	11,482
Rev. R. Wallace....	59	71	75	94	116	112	......	80	38	46	75	766
Miss Macpherson...	60	45	......	142	200	207	91	166	175	175	227	1,488
Church of England Society...........	60	85	89	83	84	144	17	126	123	74	103	988
Bristol Emigration Society...........	33	38	13	40	40	72	......	....	......	......	......	236
J. W. C. Fegan	43	......	46	49	53	100	......	73	75	109	96	644
Liverpool Catholic..	43	......	......	......	......	......	......	......	......	......	....	43
Canadian Catholic Society.	60	132	125	106	....	......	.....	......	.....	......	......	423
Catholic Emigration Association.......	......	......	151	206	328	359	175	332	308	317	334	2,510
Mrs. Birt..... ..	95	137	158	106	169	191	70	173	142	187	161	1,589
J. T. Middlemore...	108	99	127	130	......	298	.....	145	152	129	157	1,345
National Children's Home & Orphanage	29	38	41	60	84	102	109	76	90	107	106	842
Girls' Home of Welcome.............	2	4	.....	.....	......	......	......	.....	......	......	.....	6
Mr. Quarrier........	......	.....	......	.....	157	187	.....	183	173	139	192	1,031
Salvation Army	......	.....	......	......	......	20	39	.....	42	44	13	158
Children's Aid of London...........	......	2	......	.....	3	....	.....	......	24	23	26	78
Women's National..	......	......	......	....	......	......	......	31	......	....	......	31
Mrs. Wallis........	.....	.....	......	...	.....	.....	......	12	13	10	.....	35
Mrs. Close.	......	......	......	...	......	.....	......	3	......	......	......	3
East End Emigration Fund........	......	......	4	......	......	......	.....	......	.....	...	.....	4
Self Help Society...	......	......	.....	.....	......	......	......	......	13	22	80	115
Misses Smyly... ...	......	......	......	.....	......	32	10	25	22	30	27	146
Working Boys Home	......	......	.....	8	......	6	......	.....	.....	.....	.....	14
Private Parties.....	......	......	......	.....	......	....	......	..	.....	......	3	3
	977	1,540	1,979	2,212	2,814	3,258	1,455	2,375	2,424	2,422	2,524	23,980

This table it will be seen shows that an army of about 25,000 children have been brought to Canada within the space of little more than a single decade, and the small percentage of failures already alluded to, applies to all of these.

Inspector Henry makes the following report:—

'The year for inspection of British children just terminated has been, to me, more varied than former years owing chiefly to the death of Mr. Annand, of Halifax, Nova Scotia. In the month of May I was instructed to visit the provinces of New Brunswick and Nova Scotia to continue the annual inspection of the children there. While I found them in these provinces to be generally well placed, quite a number expressed discontent on account of the absence of remuneration for their services, excepting clothing and schooling to the age of sixteen. They naturally think that some monetary consideration is due to them, especially when they meet other young people similarly employed who are paid wages for their work. As a rule, however, all were well clothed, but in the case of some attendance at church, Sunday and day school was not as regular as it should have been. In fact I would suggest and recommend that the form of agreement in use in these provinces be amended so as to provide a monetary consideration for boys and girls after reaching the age of fifteen, and that attendance at church, Sunday and day school be given more prominence.

'Farming in the said provinces, owing I should say to mining and fishing, differs from that of Ontario and Quebec, but on the whole the farmers are well-to-do and in my opinion are quite able to comply with such terms as are set forth in the forms of agreement in use in Ontario. Some of the children were scattered over a wide area, long drives being necessary in order to reach them. Their health could not be better. In fact I scarcely met with any who were not robust and vigorous.

'The results of my inspection in Ontario were even more satisfactory than in former years, and a marked improvement was observed, especially in regard to clothing, school attendance, church and Sunday school. A feeling of contentment and happiness seemed to prevail almost everywhere.

'Between seven and eight hundred children were seen and reported on and I can safely say that not more than a half dozen could be termed as unhealthy or otherwise unsatisfactory.'

Inspector R. W. Hillyard says in his report:—

'The year 1911 has afforded ample opportunity of realizing the great importance of child immigration from the British Isles to Canada. On every hand we have the most undoubted evidence of the importance and success of this work. The children in most cases show an aptitude in adapting themselves to the ways and customs of the country and gradually develop into useful farm servants. My experience impresses me with the very small percentage of failures—the great majority in a lesser or greater degree are making a success of life, while their moral standing compares favourably with Canadian born children. Those who are attending school are making fair progress. Not unfrequently they stand well in their classes. Many of these children are winning warm places in the hearts of the families where they are placed, and are decidedly helpful in the performance of such labour as is required of them. Many have completed their indentures and are in receipt of substantial remuneration for their services. At times we have to mourn over some failures but it would be unreasonable to expect perfection in all. The homes placing and looking after these children have an arduous task to perform. Sometimes the children get into the hands of unworthy people, and such cases are always difficult to deal with. I would suggest that in all cases a definite sum of money be stated in the agreement to be disbursed in good and comfortable clothing. When the item of clothing is left to the generosity of employers too much economy is practised, to the injury of the child.'

The following are reports of my visits of inspection at the Receiving and Distributing Homes. Both the Imperial and Canadian governments regard the maintenance of these centres as essential to the success of the juvenile immigration movement.

THE NATIONAL CHILDREN'S HOME AND ORPHANAGE, HAMILTON, ONTARIO.

(Founded by Dr. T. Bowman Stephenson.)

During the past year one hundred and three children, chiefly boys, were sent to Canada under the auspices of this agency, and placed in the farming districts of western Ontario. I have personally visited a number of their wards in the course of the year and with few exceptions I found them well placed and well spoken of by their employers.

Mr. Hills, the Governor, keeps in touch with the children and in addition to the visits paid each child, maintains an extensive correspondence with them.

The first party of young immigrants for the calendar year reached Hamilton on the 30th instant, and I was afforded the opportunity of personally inspecting them and seeing some of their number departing for their new homes in company with employers. The lads were provided with good outfits, and were a very healthy, promising lot. Many of the party had had some previous experience at farm and garden work in England.

This home is splendidly equipped, and well managed and due regard is paid to the best interests of the children.

'FAIRKNOWE.'

Mr. Quarrier's Home for Scotch children, Brockville, Ontario.

I paid an official visit to this splendidly equipped Receiving and Distributing Home on 27th December last. There were no children in residence, and from a perusal of their visitor's reports it would appear that their wards are contentedly situated.

The work of the home under the superintendency of Reverend Robert Grierson is efficiently conducted, and in the selection of homes the highest welfare of the children is safeguarded. Their wards are placed out only after the most careful inquiry into the personal character and surroundings of the applicants. Mr. Grierson reports that during 1911 he placed 100 boys and 80 girls with farmers in the Brockville district. Many of the applicants had awaited the arrival of the children for months and some even a year.

THE 'COOMBE HOME,' HESPELER, ONTARIO.

Thirty-six children, twenty-four boys and twelve girls, were received from Ireland during the past year, a slight increase over former years. Thirty-nine children were placed in situations, or an average of one to each seven applicants. There are at present the names of one hundred and eighty-eight children on their registers. An efficient supervision has been maintained and one hundred and ninety-eight personal visits were made, and the majority of the children were found very happy and contented.

Mr. Bird, the Secretary of the Homes in Dublin, who visited Canada and made a personal visitation amongst the children during the past summer, stated, 'It makes the work much more interesting and certainly very encouraging to have such a pleasant conception of the children so well settled in life.'

This home is admirably situated and the work is carried on with the best interests of their young immigrants in view.

MRS. BIRT'S HOME, KNOWLTON, P.Q.

January 18, 1912, I paid an official visit to Mrs. Birt's Home.

The past year has been one of much activity. Three parties of children were received and distributed under direction of this agency, viz., February, seventy-two boys, April, fifty-two girls, May, twenty-four girls and forty-two boys, a total of one hundred and ninety children of the average age of fourteen years.

There were nine children in residence, seven of whom were boys and two girls. These children were busy in the class room, sewing and mending preparatory to being placed out. Their appearance was pleasing, all being neatly and seasonably clad and creditable to those in charge of the home.

The house as usual was in good order throughout and the children's quarters warm and comfortable. A fire escape had since my last visit been erected on the south side of the building.

Written agreements are entered into with employers for the children and the visitor's reports are systematically recorded. The lady superintendent and her staff are deeply interested in their work.

DR. BARNARDO'S HOMES.

It was my privilege during the past year to study the *modus operandi* of this influential organization in England, with particular regard to the reception of children into the homes and schools and the after care and training they receive, preparatory to emigration to Canada. These essential features from a Canadian point of view were found most satisfactory.

On 15th June, I inspected Dr. Barnardo's London Home for boys, Stepney Causeway. There were 350 boys under training, attending classes and being taught various trades. The training is comprehensive and useful and embraces various trades. The moral and religious instruction of the children takes a prominent position in the work of the homes.

A visit was also paid to the Girls' Village Homes, Barkingside, Essex, where under the direction of Mr. William Baker, the Director of the Homes, and Mrs. Barnardo, I inspected the cottages and saw the children in training in the different branches of domestic science. Here I saw 1,300 children of various ages. It was a most inspiring visit.

There are over one hundred homes under the auspices of The National Incorporated Association in Great Britain, housing 9,000 children. Since the year 1882, 23,135 boys and girls have been sent to Canada under the auspices of this association—a population equal to some of our Ontario cities. During the last calendar year 14,000 children were under the supervision of the Canadian agency. There are three receiving homes in Ontario and one in Manitoba with a total staff of fifty-five persons. A correspondence with the children is wisely encouraged and during the past year over 100,000 letters were posted.

On 26th January, I made my official inspection of the Boys' Receiving and Distributing Home, Toronto. Here I found twenty-eight lads of an average age of 11 or 12 years—transients in residence, i.e., formerly 'boarders' who having passed the age for boarding out were now waiting to go to the country as farm apprentices. These children were inspected in school. Three boys were found in the hospital wards —one convalescent after an attack of pneumonia, another being treated for a weak knee, and the third, a boy of seventeen who had met with an accident by falling from a tree and injuring his back—a nice intelligent boy.

A trained (certified) nurse is permanently employed and with a medical practitioner, also a member of the staff, the children have the requisite care in case of illness.

The home throughout is comfortably arranged, clean and well maintained. The children are only placed out under agreement. Their earnings which now amount to the very considerable sum of over $130,000 are collected by the general superintendent and placed in a bank in trust.

THE MARGARET COX RECEIVING HOME FOR GIRLS (DR. BARNARDO), PETERBOROUGH, ONTARIO.

This interesting home was officially inspected on February 16. Four hundred girls were emigrated to Canada last year and distributed under the auspices of Dr. Barnardo's Canadian organization. Of these new arrivals two hundred and fourteen were placed in service, while one hundred and eighty-nine under the age of twelve years were 'boarded out.'

Four thousand and seventy-six girls are at this date under the immediate supervision of this agency and require a constant visitation by a number of lady visitors whose time is wholly devoted to this important feature of the work. The province of Ontario absorbs practically all of these children.

A careful inspection of the visitors' reports was made and I found that this plan of supervision was satisfactorily performed.

The deaths of three of their wards were recorded during the year, due to the following causes, menengitis, typhoid fever and tuberculosis respectively.

Thirteen children were returned to England—two restored to their mothers, three to relatives, two owing to ill-health, one feeble-minded and three as absolute failures.

Thirty-seven children were in residence here, some of whom had been 'boarders' and had just passed the boarding out period and were being sent out to places arranged for them. Others were regular members of the house staff; three were in the infirmary, convalescent.

There are two large dormitories for the children—bright and cheerful—and in each of these I found a number of little girls busily engaged in the ordinary morning's work. The home is well adapted for its purpose and the comfort of the children during their stay is amply provided for. The staff consists entirely of ladies, some of whom have been for years connected with the work of Dr. Barnardo's homes in England.

I subsequently inspected some of the girls from the home who were in service in the city of Peterborough and from their mistresses I received most encouraging reports of their progress, behaviour and suitability.

MISS MACPHERSON'S HOME, AVON STREET, STRATFORD, ONTARIO.

On January 25, I paid my annual, official visit of inspection to this receiving home. The scope of the work of this agency is confined to the province of Ontario. There were three girls and two boys in residence. Their personal appearance was creditable. Considering the large number of children under guardianship, the fact that only five were in the home, is proof of the general satisfaction the children are giving their employers. One of the girls in residence is a permanent member of the staff and two were convalescent after severe illnesses and it was expected they would be able to take places within a few weeks.

Two hundred and fifty-nine children were received from England during the year and were placed, with few exceptions, in farm homes. This number represented an increase over that of recent years. One thousand children's names and addresses are on their visiting list, i.e., to be visited during the year. As some of the children are annually dropped from the list of those under supervision, owing to age limit, 1,100 visits were made by their agents during the past calendar year. The visitors travelled thousands of miles by rail, motor cycle and livery. It is interesting to note that these calls are appreciated, for two years ago their wards presented one of the visitors with a motor cycle.

Applications for children were greater than in former years.

I found the children's quarters warm and comfortable and properly equipped.

MR. MIDDLEMORE'S HOME, FAIRVIEW, HALIFAX, N.S.

Inspected February 9, 1912.

One hundred and seventy-one children have been emigrated by this agency during the past year, of whom one hundred and seven were boys and sixty-four girls—ages 6 to 16 years. There were two boys in the home at this date.

The records of the agency show that on December 31st last, nine hundred and twenty children were under their supervision. Two children were returned to England; seventy-two changed situations for the following reasons: Nine were dissatisfied, forty-two unsatisfactory, eight unsatisfactory or poor homes and thirteen where employers were dispensing with their services. Twenty-nine of these children were from poor law schools. The superintendent advised me that few of their wards returned to the home, five being the highest number at any period, and their stay extended over a few days only. The children are distributed as follows: Nova Scotia, four hundred and fifty-six; New Brunswick, four hundred and forty-one; Prince Edward Island, twenty-three. They are now being placed out on the following terms—for boys attending school, $5 to $6 a month, and those past the school age, $6, $8 and $10 a month according to capability.

I visited the children's quarters and found them very comfortable.

Mr. J. Sterling King has recently succeeded Mr. F. A. Gerow, who for a number of years had acted as agent for Mr. Middlemore. During the past year, Mr. Middlemore, M.P., of Birmingham, the founder of the home, visited Halifax.

MARCHMONT HOME, BELLEVILLE, ONTARIO.

On the occasion of my annual visit of inspection at this pioneer home, January 23, 1912, I found but three children in residence.

Reverend Mr. Wallace reported a satisfactory year's work. One lad was returned to England during the year owing to illness; no deaths occurred. A number of boys and girls have married and settled down on their own account. During the calendar year, fifty-three boys and sixteen girls were received and placed in approved homes and situations. These children had come from the following places in Great Britain:

	Boys.	Girls.
Manchester	19	12
Salford	15	3
Prestwich	3	1
Chorlton	4	
Stockport	1	
The Royal Albert Orphanage, Worcester	5	
Dr. Guthrie's Homes, Edinburgh, Scotland	3	
Isle of Man	2	
Special or privately brought out	1	

This home is splendidly arranged and every comfort provided for the children during their stay there. The visitor's reports and the history of each child are carefully kept.

With the urgent demands on Mr. Wallace for juvenile farm help from the farmers of the surrounding counties it is to be hoped that during the coming year a larger number of juveniles than that of the past year may be emigrated.

THE SALVATION ARMY, TORONTO.

The emigration of children by the Salvation Army has as yet been quite limited but I am advised there is in contemplation an enlargement of this branch of the army's immigration system. At this date there are twenty-two of their wards under the supervision of this department.

During the year just closed twenty-four children, chiefly boys were emigrated and placed on farms.

The facilities for the reception and distribution of juveniles at the New Comers' Inn, Peter Street, Toronto, are excellent.

ST. GEORGE'S HOME.

The Catholic Emigration Association's Receiving and Distributing Home, Ottawa.

Two official visits were paid to this home during the year. There were on January 1, 1912, some 1,366 children under the care and supervision of the association. During the past year 275 boys and 124 girls were received from Great Britain. They were of age from 10 to 17 years past, the latter numbering twenty in all. Seven of their former wards are attending college. Two others have become professors in colleges. The records of the home and the visitors' reports were very satisfactory. The distribution of their wards was as follows:—One hundred and eighty-eight were placed in the province of Ontario, two hundred and five in the province of Quebec, three in Nova Scotia and two joined relatives.

There were six children in temporary residence, some had just returned a day or two previous to my visit and places had already been selected for them.

The home is well maintained throughout. Plans have been prepared for an addition to the home proper and work will be begun at once. This extension will include better accommodation for the sisters and special quarters for girls, an infirmary and office.

MR. FEGAN'S HOME.

295 George Street, Toronto.

On March 21, I paid an official visit to Mr. Fegan's Receiving and Distributing Home. This occasion afforded me the opportunity of forming a very fair idea of the scope of the activities of this interesting branch. There are approximately five hundred boys in Canada under the immediate supervision of Mr. Fegan—practically all engaged in farm work.

I perused a number of their visitors' reports which not only showed that the lads were thoroughly contented in their occupation, but giving their employers good satisfaction.

The superintendent and his assistants were busily engaged making out new engagements for their wards for the coming year. A pleasing feature of this work which I noted was the fact that fully 95 per cent of the boys were rehiring with their old employers for another year. Especially satisfactory is this when it is remembered that these young fellows are informed that on the completion of their first year's service they may, if they wish, change their situations. For his first year's service a boy of fourteen years receives a wage of from $48 to $50.

There was one boy in residence, under treatment for injuries, the result of a kick from a colt which he was driving into a stable. He is a fine type, of good intelligence and physique. I was particularly interested in the boy in question as I had personally recommended when in England his emigration to Canada. It is quite probable he will return to his old employer when fully recovered.

Each lad has a separate wage account, and is paid 4 per cent on his savings—one per cent over the current bank rate—a wise plan as it will inculcate habits of thrift and give him that feeling of independence, when a boy knows he has cash in the bank. A monthly audit is made of these individual wage accounts by a professional accountant.

The first party of children for 1912 will it is expected sail early in April.

During my recent visit to Great Britain I was afforded several most interesting and instructive interviews with Mr. J. W. C. Fegan and learned much from him concerning the pre-emigration training given his protegés which is very satisfactory. Mr. Fegan has acquired eighty-four acres of land at Goudhurst in Kent for the purpose of establishing a training farm school for boys—prospective emigrants to Canada—which in regard to buildings, crops and implements will be a reproduction of a Canadian farm homestead. This training should be of great benefit to the lads when they come to Canada.

THE GIBB HOME, SHERBROOKE, P.Q.

On December 1, I paid my annual visit of inspection at this receiving home. That their young immigrants are well settled was made evident by the fact that there was only one boy here at this date owing to illness, a fine, bright young fellow of 17 years of age.

The home is in charge of a matron of some years' experience.

There is an upward tendency in the wages demanded for the boys. The farms of the eastern townships of Quebec provide a most desirable school for the boys. The general progress and behaviour of the children have been good.

The home affords a pleasant and comfortable place to which their wards may return when changing situations.

OUR WESTERN HOME, NIAGARA-ON-THE-LAKE, ONTARIO.

Church of England Society's Canadian Branch for Girls.

On February 21, I paid an official visit of inspection to this old established home. There were forty-one girls mostly under the age of fourteen years, in residence. This is not due to the fact that there are not sufficient applications as Miss Bayley informed me she could not supply the demand but owing to the policy of the society not to send out into service children until they had passed their fourteenth year.

A good training is afforded the children in sewing and general house work while a competent teacher is engaged in a private school which the children attend. Each child attends school half a day and the balance of their time is spent sewing and mending. They make their own clothing and do the necessary mending.

The lady superintendent informed me that the children had been singularly free from sickness, not even a bad cold appearing amongst them during the past twelve months.

I visited every portion of the home and saw the girls in their daily routine of work.

The home, not originally designed for its present occupation, is a large building, but it has been well improvised. A fire escape is to be at once erected on the west side of the building. The sanitary arrangemnts and water works system are good, The sleeping quarters for the children are large and airy and beds comfortable.

Only one child was returned to England during the year—owing to hip disease—and no deaths occurred amongst their number. There are one hundred and fifty children on their visiting list.

The home throughout was in good order and scrupulously clean and tidy.

SELF HELP SOCIETY—EAST END EMIGRATION FUND OF LONDON, ENGLAND.

Mr. E. Marquette, Provincial Immigration Agent, Montreal, has for many years received and placed out juveniles sent forward by these organizations. By special arrangement, St. George's Home and the Women's National Emigration Homes are respectively utilized for the reception of their immigrants.

Mr. Marquette reports that the societies which he represents have been much encouraged by the progress and success of their protegés. They have been placed in satisfactory homes and are earning good wages. A great demand for girls of 17 and 18 years as domestic servants has kept up. A number of boys have been placed in farm occupations in the eastern townships.

Your obedient servant,

G. BOGUE SMART,

Chief Inspector of British Immigrant Children and Receiving Homes.

BORDER INSPECTION OF IMMIGRANTS.

No. 1.

REPORT OF TRAVELLING INSPECTOR T. B. WILLANS.

I beg leave to submit my fourth annual report.

In the eastern district, of which I have charge, extending from Halifax to Toronto, the following are the names of the ports with the number of the inspectors:—

Name of Port.	Regular Immigration Officers.	Customs Immigration Officers.	Total.
Yarmouth, N.S	..	1	1
Port Hawkesbury, N.S	..	1	1
Clementsport, N.S	..	1	1
Clair, N.B	1	..	1
Edmundston, N.B	1	..	1
Green River, N.B	..	1	1
St. Leonards, N.B	1	..	1
Grand Falls, N.B	1	..	1
Centreville, N.B	..	1	1
Andover, N.B	..	1	1
Aroostook Junction, N.B	1	1	2
Richmond Road, N.B	..	1	1
Canterbury, N.B	..	1	1
McAdam Junction, N.B	2	..	2
St. Stephens, N.B	1	2	3
Upper Mills, N.B	..	1	1
Milltown, N.B	..	1	1
St. Andrews, N.B	1	..	1
Wilson's Beach, N.B	..	1	1
Welshpool, N.B	..	1	1
Grand Manan, N.B	..	1	1
Megantic, P.Q	1	..	1
Pacquetteville, P.Q	1	..	1
Beebe Junction, P.Q	2	..	2
Georgeville, P.Q	..	1	1
Magog, P.Q	..	1	1
Highwater, P.Q	2	..	2
Mansonville, P.Q	1	..	1
Coaticook, P.Q	2	..	2
Norton Mills, P.Q	..	1	1
Dundee, P.Q	..	1	1
Lacolle Junction, P.Q	..	1	1
Rouse's Point, N.Y	2	..	2
St. Albans, Vt	2	..	2
Malone, N.Y	1	.	1
Portland, Me	..	1	1
Frelighsburg, P.Q	..	1	1
Neyan Junction, P.Q	1	..	1
Cornwall, Ont	1	2	3
Morrisburg, Ont	.	1	1
Iroquois, Ont	..	1	1
Prescott, Ont	3	..	3
Brockville, Ont	1	..	1
Rockport, Ont	..	1	1
Gananoque, Ont	..	1	1
Kingston, Ont	..	3	3
Deseronto, Ont	..	1	1
Bath, Ont	..	1	1
Belleville, Ont	..	1	1
Picton, Ont	..	1	1
Trenton, Ont	..	1	1
Brighton, Ont	..	1	1
Cobourg, Ont	..	2	2
Port Hope, Ont	..	1	1
Total	29	41	70

In addition to the above I have had two relieving officers whose duties were to relieve officers when on their holidays and to assist when necessary at the different ports at times when the traffic is unusually heavy.

The total number of admissions and rejections at the above mentioned ports during the past year, were:—

Admissions	26,960
Rejections	2,980

Taking twelve of the principal ports in the eastern district, I find the following interesting comparison of the admissions and rejections during the past two years.

Name of Port.	Admissions 1910–11.	Admissions 1911-12.	Rejections 1910-11.	Rejections 1911-12.
McAdam Junction, N.B	2,972	4,896	101	89
St. Albans, Vt	3,461	4,702	116	312
Highwater, P.Q	3,521	4,039	214	260
Beebe Junction, P.Q	3,293	3,583	86	228
Noyan Junction, P.Q	1,056	2,161	170	326
Rouse's Point, N.Y	899	1,664	273	588
Coaticook, P.Q	1,244	1,434	113	163
Malone, N.Y	1,381	1,218	114	289
Cornwall, Ont	443	493	76	104
Megantic. P.Q	371	421	33	15
Prescott, Ont	217	361	149	209
Brockville, Ont	161	277	3	14

The total number of admissions and rejections along the border from the Atlantic to the Pacific during the past year were, admissions, 133,710; rejections, 22,033, compared with 121,451 admissions and 15,004 rejections in the previous year.

These figures, I think, are sufficient evidence to show the growing importance of the border inspection. Not only has there been a large increase in the admissions but most striking is the great increase in rejections, and this is particularly noticeable when the figures of the rejections along the border are compared with the number of rejections at the ocean ports, which, during the past year, were 972. From such a statement it is very plain that a careful watch will have to be maintained along the International boundary as it is evident there are large numbers in the United States who are anxious to gain admittance to Canada. and who are looked upon as undesirable settlers for this country.

In explanation of what may appear to be the small number of rejections as compared with the number of admissions in the eastern district, in comparison with the figures of the other districts, I might state that there is a large immigration from the New England States *via* ports in the eastern district to points in Canada. The vast majority of these are most desirable settlers, and very few have to be rejected. In the eastern district there are no large American cities in close proximity to the Canadian border. The undesirables who are rejected at the border come chiefly from Boston, New York, Philadelphia and some of the large factory towns in New England. The railway fare from these towns to points in Canada is a considerable item, and parties knowing the regulations required of them before entering Canada, will in most cases see that they can qualify before starting out on such an expensive trip, and those who are rejected at the border and returned will hesitate before again spending their money in attempting to enter Canada, hence the officers in my district are not often troubled with the same party trying a second time to gain admission. These conditions are also responsible to a great extent for the small number of prosecutions.

In the eastern district inspection of passengers takes place on the following lines of railway:—The Canadian Pacific Grand Trunk, New York Central (including the

Rutland and the Ottawa and New York), the Boston and Maine, the Maine Central, the Orford Mountain and the Washington County. The staff of immigration officers now employed on the trains on these lines of railway are able to do their work efficiently so far as the inspection of passengers is concerned. At some of the ports a good deal of attention has been given to inspecting freight trains and many parties who were attempting to enter Canada by stealing rides on these trains have been taken off and sent back. Other good results are being accomplished in some of the country districts where telephones are in use by the farmers. Many tramps on their way to places in Canada, who have been in the habit of asking for meals at these farm houses and who have been found sleeping in the barns, are now often arrested by the farmer notifying the immigration inspector over the 'phone, and those found to be American citizens are taken in person by the Canadian officer to the American officer and returned to the United States, thus ridding Canada of some very undesirable and at times dangerous individuals.

One of the most difficult matters to contend with is where persons in the States will purchase tickets to the town nearest the Canadian border and then attempt to walk in by road and board the train at some station on the Canadian side. These conditions have been receiving careful attention from the officers and some excellent work has been done with a view to checking it, and, with the appointment of the extra officers which I have requested at certain ports, it is my purpose to devote special attention to this phase of work.

In view of the change made last October when the Chinese branch was transferred from the Trade and Commerce Department to the Immigration Department, this has caused some extra work for the officers at two of the ports in the eastern district, viz., Highwater, P.Q., on the C.P.R., and Athelston, P.Q., on the N.Y.C.R., as a large number of Chinese pass through these two ports during the year.

It is very pleasing for me to be able to report that the officers continue to take a keen interest in the work, and so far as I am aware no complaint has reached the department from the travelling public or transportation officials regarding the work or conduct of any officer in my district during the past year. Knowing as I do the difficult task which these officers have to perform in the discharge of their duties, such a record as is presented by the figures showing the number they admitted and rejected without a complaint to the department regarding their work or conduct, is, I think, the strongest evidence possible to show that the men are doing their work efficiently and in a manner satisfactory to all.

Last July I received instructions to meet the party of British press men who were making a tour of Canada. I met them at Rimouski and spent three weeks with them travelling through the Maritime provinces, Prince Edward Island, Quebec and a portion of Ontario. They were most anxious to obtain all the information possible regarding the resources and opportunities in these provinces, and I need not say it was a great pleasure for me to spend so much time in their company and do what I could to make their trip a pleasant and profitable one.

In addition to the border work I have had charge of the inspection of the passengers arriving by steamer at Portland, Me., during the winter months destined to points in Canada. During the past winter the White Star, Dominion, the Cunard and the Allan lines have had regular sailings from British ports to Portland, and the number of passengers for Canada will show a very large increase this year over last. By the end of April it is fully expected that over 10,000 settlers for Canada will arrive at Portland. A very large number of these are from the British isles, whilst the foreigners are chiefly from northern Europe. I was very much impressed with the good class of immigrants arriving, the large number of young men and young women, and on some of the steamers the families of bright and healthy boys and girls were a matter of much favourable comment.

The accommodation at Portland for the handling of such large numbers is altogether inadequate, but I understand the Grand Trunk Railway Company, who are the owners of the immigration building, intend before another season to enlarge the premises so that there will be ample room and proper equipment for the inspection and comfort of the passengers. This portion of my work has proved most interesting to me, bringing me as it has in contact with so many people coming to this country for the first time and giving me an opportunity of seeing the different classes of immigrants, affording me in a small way at least an opportunity of extending to them a welcome in this new land of promise.

I would like to take this opportunity of expressing my appreciation of the courtesy shown me by the American immigration officials at Portland, and of their desire under existing circumstances to assist me in any way they could to facilitate the inspections of the Canadian passengers.

In reviewing the border work since its inauguration four years ago, I feel there are many things for which we who have had charge of the work can be thankful.

When the border inspection was first commenced the object and aim of this work was for some considerable time misunderstood by the travelling public, the transportation companies and by the press throughout the country. Our officers were inexperienced in the work, and, owing to the wrong impressions abroad, the duties of an immigration inspector were not only most difficult to perform but his position was a very unpleasant and thankless one. To-day a great deal of this wrong impression and misrepresentation of the border work has disappeared. The press instead of criticizing and finding fault with what they termed so much red tape and unnecessary inspection of passengers, realize the importance of the work and in many instances have commended the department for the means they are taking to afford a proper selection of those who should be admitted to Canada and of protecting our country from undesirable citizens.

The police magistrates, municipal and other officials of the various border towns to-day are loud in their praise of the good work being accomplished by the immigration inspectors. The conductors, brakesmen and other officials of the transportation companies are now only too ready and willing to assist the officers in any way they can to enable them to carry on their work, whilst last but not least the travelling public themselves are beginning to realize that this work is in the interests of the country, and as a rule are ready and willing to answer the questions put to them by the inspector.

Suitable buildings have been provided at all the principal ports in the eastern district for the inspection and detention of passengers. These buildings are proving to be of great assistance to the officers in the performance of their duties, and at the same time afford comfortable accommodation for passengers who may be detained for any reason. With the erection of one or two more during the present year the district under my charge will have all the buildings that are necessary.

With a staff of immigration inspectors, such as I have in my district to-day, men of good conduct, gentlemanly in their manner, showing common sense and good judgment in their decisions, and fully recognizing the importance of the service, I have every reason to have ample confidence in their intelligence and in their desire to carry out the wishes of the department with respect to the enforcement of the immigration regulations, and I feel satisfied that the good progress which has been made will continue and we can look forward with confidence regarding the work in the future.

I am glad to say the best of harmony exists between the American and Canadian border inspectors, and that much good work has been accomplished by the willing co-operation of the officers of the two countries.

Allow me to express my appreciation of the consideration you have given to my suggestions and recommendations during the past year.

Your obedient servant,

T. B. WILLANS,
Travelling Immigration Inspector.

No. 2.

REPORT OF TRAVELLING INSPECTOR H. G. HERBERT.

OTTAWA, April 1, 1912.

The Superintendent of Immigration,
Ottawa.

SIR,—I have the honour to submit my third annual report as travelling immigration Inspector.

The section of frontier work of which I have charge extends from Toronto to the south-eastern corner of Manitoba, and is known as the Central Border District. My duties include a supervision of all the passenger and immigrant traffic entering from the United States into Canada at the regular ports of entry in this district, and, as far as possible, the checking of the 'smuggling' of prohibited immigrants. This illegal traffic is not carried on in broad daylight but most frequently under cover of night, and it no doubt occurs at numerous points in my district. We look for it particularly along the Niagara River frontier, the shores of Lake Erie—the Detroit river and St. Clair river frontiers—at points on Lake Huron—along the St. Mary's river (above and below Ste. Marie)—on Lake Superior and throughout the Rainy River and Rainy Lake district.

On March 31, 1912, seventy-eight immigration inspectors were on duty in my district. Their allotment to the thirty-eight recognized ports of entry is given in table A, hereunder, which has been arranged in geographical order.

INCREASE IN THE NUMBER OF REGULAR IMMIGRATION INSPECTORS.

Although the total number of inspectors in my district has not increased to any great extent during the past four years, it will be seen from the following table that the department has steadily followed a policy of having this boundary inspection of immigration attended to by its own special officers, who can devote their whole time and attention to such work. The number of regular immigration inspectors has accordingly grown from 17 to 42, as, from time to time, the Customs inspectors have been relieved from immigration duties at the busier ports. Responsibility being no longer divided better system and discipline are possible and the efficiency of the staff has, I think, been more than doubled. On account of the rapid growth of the work of the Customs inspectors it is only at the less important ports that the department should rely upon the assistance of these officers for immigration inspection work.

No. of inspectors on March 31.	1909.	1910.	1911.	1912.
Immigration inspectors	17	25	29	42
Customs immigration inspectors	66	52	56	36
Total	83	77	85	78

TABLE A.

CENTRAL BORDER DISTRICT.

SHOWING the Number of Inspectors on Duty and the Number of Immigrants admitted and rejected by them.

Name of Port.	Regular Immigration Inspectors.	Customs Immigration Inspectors.	Total No. of Inspectors.	Immigrants Admitted.	Immigrants Rejected.
Toronto	1	...	1	...	16
Port Dalhousie	...	1	1	4	...
Niagara on Lake and Lewiston, N.Y.	1	...	1	328	84
Queenston	...	2	2	...	...
Niagara Falls	9	2	11	3,030	3,341
Bridgeburg	3	2	5	2,118	1,323
Fort Erie	1	3	4	178	427
Erie Beach	...	1	1	...	...
Crystal Beach	1	1	2	18	145
Port Colborne	...	1	1	...	...
Port Dover	...	1	1	...	...
Port Burwell	...	1	1	...	...
Port Stanley	...	1	1	1	1
Rondeau	...	1	1	...	...
Kingsville	...	1	1	...	...
Amherstburg	...	1	1	12	...
Windsor	9	...	9	4,818	2,614
Walkerville	2	...	2	258	519
Walpole Island	...	1	1	13	...
Port Lambton	...	1	1	...	4
Sombra	...	1	1	47	...
Courtright	...	1	1	15	...
Sarnia	4	...	4	2,595	531
Point Edward	...	1	1	1	13
Goderich	...	1	1	...	...
Owen Sound	...	3	3	...	...
Collingwood	...	1	1	...	...
Midland	...	1	1	...	...
Depot Harbour	...	1	1	1	...
Parry Sound	...	1	1	...	...
Little Current (Manitoulin Id)	...	1	1	11	...
Cutler	...	1	1	...	...
Blind River	...	1	1	...	...
Thessalon	...	1	1	8	...
Sault Ste. Marie	4	...	4	4,935	1,024
Port Arthur	1	...	1	2,149	137
Fort William	1	...	1	1,066	25
Fort Frances	3	...	3	6,189	827
Totals	40	36	76		
Relieving Inspectors in addition to those at Lewiston and Crystal Beach	2	...	2		
Totals	42	36	78	27,795	11,031

ADMISSIONS FROM THE UNITED STATES.

A comparative review of figures of the immigration across the border during the past four years illustrates the vast increase of one phase in the work of your inspectors.

Fiscal year of 1908-09 total immigration from U.S.			59,832
"	1909-10	" "	103,798
"	1910-11	" "	121,451
"	1911-12	" "	133,710

Increase equals 123 per cent in 1911-12 over 1908-09.

Of the 133,710 immigrants who entered Canada from the United States between April 1, 1911, and March 31, 1912, all were individually and carefully examined by the border inspectors who are distributed along the whole length of the International boundary. Of this total 27,795 were examined by the inspectors in my district.

REJECTIONS AT THE BORDER.

The total number of immigrants rejected from the whole of Canada (ocean ports and border ports) during the last fiscal year was 23,006. The rejections at ocean ports were 972, while no less than 22,034 were rejected at the various ports along the border. These are startling figures but it must not be supposed for a moment that they refer solely to rejections of United States citizens, who, as a matter of fact, make up but a small percentage of this enormous total. It must be remembered that the neighbouring republic has enormously increased, and is increasing, its population by the immigration of people whose racial customs and habits of thought are entirely unsuited to the conditions and requirements of Canada. These enter the United States with comparative freedom, and, attracted in considerable numbers towards our country by its superior advantages, attempt to enter Canada at the 'back door,' so to speak. This is the chief problem of the Border Service.

A comparative review of figures of immigrants rejected at the border during the past four years is interesting as proof of the increased work of a less pleasing character.

Fiscal year	1908-09	total of immigrants	rejected	4,580
"	1909-10	"	"	8,997
"	1910-11	"	"	15,404
"	1911-12	"	"	22,034
Total for four years				51,015

Of the 22,034 rejected last year, 11,031 or more than half the number, were rejected by the inspectors in my district. In other words, after a searching and separate examination in each of these cases, your inspectors were forced to decide that Canada would not be a gainer but most probably a heavy loser by the admission of any member of this huge army, which included many misfits, possible public charges and criminals also. These figures would have been even greater but for the disinclination on the part of many of the prohibited classes to trifle with regulations whose rigid enforcement has been given the widest publicity in the newspaper reports of vigorous prosecutions along the whole International boundary.

'THE WHEAT FROM THE CHAFF.'

The policy of selection has been most strictly followed. What better proof can be given of the increasing care and vigilance of the Border Service than that given in the following return:—

In 1908-1909	for every	1,000 immigrants	admitted	76	were rejected.
In 1909-1910	"	"	"	86	"
In 1910-1911	"	"	"	128	"
In 1911-1912	"	"	"	165	"

PROSECUTIONS UNDER THE IMMIGRATION ACT.

More than 400 prosecutions for breaches of the immigration regulations were undertaken by the officers in my division during the past year, and in all but a few cases these were conducted without any legal assistance. Many of these cases presented unusual difficulties, but the high percentage of convictions obtained (as shown in the following report) is the best evidence of the careful attention given by your inspectors to a new feature in immigration work.

PROSECUTIONS—CENTRAL BORDER DISTRICT.

Name of port.	Informations laid.	Convicted.	Dismissed.	Withdrawn.	Amount of Fines.
Niagara Falls	107	106	1	0	1,956 00
Bridgeburg	107	107	0	0	1,623 00
Fort Erie	12	12	0	0	118 00
Windsor	84	80	4	0	1,325 00
Walkerville	8	8	0	0	125 00
Sarnia	10	10	0	0	215 00
Toronto*	12	1	0	3	400 00
Sault Ste. Marie	61	59	2	0	877 00
	401	383	7	3	$6,639 00

*Toronto—8 cases unfinished.

A detailed report of the interesting features in some of these cases would furnish good material for books of detective stories, of comedy—yes, and of tragedy too. Such a report would at any rate win increased respect for the alertness and patience of the inspectors concerned.

This feature of border work demands a great deal of time. Special attention to this has been considered necessary in order to make it known that Canadian laws must be respected. In their determination to reach Canada many of the prohibited classes have resorted to the most devious methods of evasion and misrepresentation. To combat this, calls for increased vigilance and the records will show that your inspectors have proved themselves equal to almost every kind of emergency. The wide publicity given to reports of these prosecutions in both countries has no doubt done much to deter many from attempts to evade your inspectors.

The following are samples of cases dealt with by your border inspectors. The immigrants referred to were for various reasons inadmissible to Canada, and, for brevity, I shall quote merely from headlines taken from newspaper reports of the cases:—

(*a*) Four Bulgarians in a row boat at night dodged the ice floes on the wide reaches of the Upper Niagara. Landed several miles from inspectors' post. Captured on arrival. Heavily fined and deported.

(*b*) Five Macedonians taken from a locked car on freight train in mid-winter. Concealed there for hours. Were nearly frozen to death when discovered on arrival at the border.

(*c*) Italian immigrant with Canadian citizenship papers proved to be imposter. Prominent Italian banker in Canada pays a penalty of $250 for supplying the false papers.

(*d*) Armenian interpreter attached to Canadian law courts returns from Buffalo accompanying fellow countrymen. Tried to persuade inspector that these were residents of Canada. Convicted and fined $500 and costs.

(*e*) Macedonian resident of Toronto for trying to smuggle four countrymen into Canada via devious routes, convicted and fined $400. Skipped the country on day of trial. Later apprehended by inspectors and again brought to justice.

The long stretches of navigable rivers opposite such large cities as Buffalo and Detroit present difficulties in dealing with the efforts of certain classes to gain admission to Canada. There are rivermen with launches and boats who make a business of smuggling aliens into Canada. In many cases the aliens captured by your inspectors have admitted paying as high as $25 and even $50 each for landing in Canada at a spot supposedly safe from immigration inspection. It is almost impossible to stop this traffic altogether but the assigning of an officer to patrol the shores at unexpected intervals has done much to check the traffic. The appointment of local officers, whose movements would soon be known. to guard any given spot would only divert such traffic a few miles up stream or down stream. There have been numerous captures under this system of patrol.

OFFICE ACCOMMODATION AND DETENTION ROOMS.

It is with pleasure that I refer to the improved conditions under which your inspectors are now performing their work in my district. Two years ago there was no office accommodation of any kind for the use of border officers. Much of their work was done on railway platforms, on ferry docks and in general waiting rooms at the various depots under conditions which made the work doubly hard. excepting in one or two ports where the courtesy of the Customs officials permitted the sharing of insufficient accommodation—often to their own inconvenience. The compliance of the various companies with recent legislation on this subject has quickly remedied this disagreeable state of affairs. The principal ports have been supplied with suitable offices and accommodation for the examination and detention of immigrants. In most cases these have been specially built to conform with plans prescribed by the department. and. as required by law. these accommodations are supplied. maintained and equipped at the expense of the various transportation companies.

LIST OF BUILDINGS—CENTRAL BORDER DISTRICT.

Border Port.	Nature of Accommodation.	Supplied by.
Lewiston	1 office and 1 room	Niagara Navigation Co.
Niagara Falls	2 offices and 3 rooms	Grand Trunk System.
"	1 room	Michigan Central RR.
"	1 office and 1 room (a)	Railway Arch Bridge.
"	1 office and 1 room (a)	Upper Steel Arch Bridge.
Bridgeburg	2 offices and 2 rooms	Michigan Central RR.
Fort Erie	1 office and 1 room	Fort Erie Co.
Crystal Beach	1 office and 1 room	Lake Erie Excursion Co.
Windsor	1 office and 2 rooms	Michigan Central RR.
"	1 office and 3 rooms	Canadian Pacific.
"	2 offices and 1 room	Detroit Ferry Co.
"	1 office and 2 rooms	Grand Trunk Ry.
Walkerville	1 office and 2 rooms (b)	Walkerville Ferry Co.
Sarnia	1 office and 2 rooms (c)	Grand Trunk System.
"	1 office	Port Huron Ferry Co.
Sault Ste. Marie	1 office and 3 rooms	Canadian Pacific.
"	1 office and 1 room	International Transit Co.
"	1 office and 1 room (d)	Government.
Port Arthur	Offices	Booth Line & Can. Pacific.
Fort Frances	1 office and 3 rooms (b)	Canadian Northern.
"	1 office and 1 room (b)	International Bridge Co.

NOTE (a) Arrangements not quite completed. (b) Plans agreed upon and building commenced. (c) Temporary accommodation only. (d) Built by Government on water front for winter patrol of ice bridge.

THE BORDER INSPECTORS.

Border inspection as now systematically established, enters upon its fifth year well organized and in a creditable state of efficiency. This rapidly growing branch of the government service has already won a name for its vigilance, its activity and its thoroughness. Its activity in the initial years was a subject of much adverse criticism for the reason that its objects were not then sufficiently understood. To-day the attitude of the travelling public, and of the stay-at-home public also, is, I think, one of active sympathy with, and approval of, the efforts of your immigration inspectors to protect the land we live in against the influx of undesirables.

Speaking from a personal knowledge of the majority of the inspectors who are doing this important out-post work, I can only say that few officers in the service of Canada have worked harder to obtain, or better deserve, the appreciation of the country at large. No longer the subjects of unreasonable and unjust attacks from unexpected quarters, your inspectors take an ever increasing interest in their duties, and find more pleasure in performing them politely but fearlessly.

During the year now under review I was called upon to investigate three complaints against the actions of inspectors in my district. In only one case did I find reasonable cause for complaint, and your prompt dismissal of the officer involved is the best assurance the public can have that the department insists upon the exercise of civility, tact, and good judgment at all times—particularly in emergencies. Considering the difficult and, at times, delicate nature of much of the inspection work, there is room for congratulation that complaints have been so few.

I regret having to refer to the loss by death of two of your officers during the year—Mr. Charles Quallins, of the Windsor staff, an old servant of the government, and Mr. Walter R. Meyers, the inspector-in-charge at Sarnia.

I notice with pleasure that the department has appointed a Travelling Immigration Inspector who will devote his time to systematising the work at the various ports on the British Columbia border. Here I might mention that one of the most experienced and competent inspectors in my district, Mr. C. E. Willox, inspector-in-charge at Niagara Falls, was temporarily transferred to the British Columbia district to assist in settling some difficulties which arose in connection with the wholesale smuggling of prohibited aliens. He returned to his own port after an absence of six months. I think that this experiment could be followed further with equally successful results. The comparison of methods and exchange of ideas must be beneficial to every one interested.

Along this line, the work of the four Relieving Inspectors in my district, Messrs. W. R. Little, Guy Condon, Austin J. Murphy and W. J. White, junior, have assisted greatly towards uniform methods. Their transfer from port to port to relieve inspectors absent on leave, or on account of sickness, and generally to assist in emergencies, has given them a knowledge of the country and of the conditions at various ports which is necessary for a proper co-operation between the different staffs.

AS OTHERS SEE US.

For the further encouragement of those engaged in immigration inspection, I would like to refer to a three-page article which appeared in the *Saturday Evening Post* of August 26, 1911, written by Albert J. Beveridge and headed 'Our Canadian Cousins—How they handle the Immigration Problem.'

The article is a generous appreciation of Canada's policy, laws and regulations 'administered by officers carefully trained and in enthusiastic sympathy with this policy.' After several complimentary references to the border service, appears the following in a footnote:—

> 'Author's note.—Some say that the work of the Canadian immigration agents and inspectors is far from ideal. Wherever abides the Anglo-Saxon, abides also grumbling, and undoubtedly there is ground for it. But, on the whole, Canada's immigration service is the best in the world. This truthfully may be said even when conceding that there is room for improvement in Canada's inspection service and immigration propaganda.'

RELATIONS WITH U.S. IMMIGRATION STAFF.

A report of my work would not be complete without a reference to the excellent feeling which exists between the immigration staffs of Canada and of the United States. This is one of the pleasant features of work which might otherwise be disagreeable. Much of the work takes on an international aspect and but for a complete accord between the staffs to the north and south of the 'imaginary line' this could at times be productive of rivalry and friction. The recent dismissal of the one inspector who disregarded the rights of the officers across the line, is regretted by the staffs of both countries. But it is satisfactory to be able to point to this as being the only instance where there has been a departure from the rule that the best of relations and mutual confidence do exist and must exist.

An incident which happened during the year is worth recalling. At no port on the border are the conditions more difficult than at Niagara Falls, where both countries maintain a large staff. The U. S. Inspector-in-Charge was recently transferred to the West. On the eve of his departure he was given a royal send-off at a banquet *in Canada* given *by Canadian inspectors.*

Upon my numerous visits to U. S. border ports I have received not only friendly and courteous treatment but practical and valuable assistance also from the U. S. officers. It occurs to me that a systematic co-operation may be necessary some day in order that certain problems may be successfully dealt with by the two countries. This should be an easy matter where the spirit of co-operation already so largely exists.

THE CO-OPERATION OF MUNICIPAL AND OTHER AUTHORITIES.

An encouraging feature of border work is the increasing co-operation of the police magistrates, the municipal authorities and the provincial and municipal police. When conferring recently at Port Dover with Commander Robinson of the C.G.S. *Vigilant* cruising on Lake Erie in the fisheries protection service, regarding the reported crossing of Lake Erie by prohibited aliens in fish tugs from the United States, he expressed his willingness to attend to any immigration duties which might be assigned to him with the consent of his department. To the generous assistance of the Customs officials is due much of the earlier success of this work. This assistance is still readily given wherever required and it is gratifying to note the increased interest taken in immigration work by the officials in other departments, not only in the border districts but in the inland towns also. This all round co-operation is the best indication of a national sympathy with the objects of border inspection.

GENERAL REMARKS.

During the fiscal year I made more than 150 visits of inspection to the ports in my district. Apart from a general direction of the varied duties of the inspectors at these ports, a considerable part of my time was devoted to the investigation of various matters affecting the different districts throughout Ontario. Numerous complaints were submitted of the illegal entry of prohibited aliens to the inland cities and towns. The actual cases were not numerous and were promptly dealt with. The importance of keeping in close touch with the labour conditions in the larger towns was not lost sight of. The preparation of plans for, and the arrangement of all the minute detail in regard to, the numerous buildings referred to earlier, have occupied a great deal of time which in the coming year can be devoted to other features of the work. Much of my time was given to the various prosecutions referred to. The collection of evidence in special cases necessitated frequent trips outside of my district. In connection with one case alone I was obliged to seek evidence in Pennsylvania, Massachusetts, Connecticut and New York in addition to six or seven towns in Canada.

In company with my co-worker Mr. Willans, travelling inspector for the eastern district, I made two trips to the Atlantic ports to assist him and his staff in the inspection of the spring rush of overseas immigrants via Portland. The cheery optimism of the British immigrant was strikingly illustrated on the arrival of the SS. *Megantic* at Halifax with 1,800 immigrants for Canada, in weather which was exceptionally bleak and disagreeable for Halifax at that season. Four or five inches of wet snow made an uncomfortable mess of the decks, docks and landing places. Totally unprepared and insufficiently clad for such a chilly reception, about 800 of the party landed at Halifax to the accompaniment of a bitter wind and driving sleet. This party was made up chiefly of women and young children who were on their way to new homes which had previously been made ready for them in the far west. The children's bare legs and unprotected hands were blue with the cold as they assisted their mothers in gathering together the 'too elusive luggage.' But not a single complaint was uttered during the long and tedious process of landing so large a party. They all appeared quite happy. The ready smiles of those young children whose faces were pinched with the cold, conveyed a lesson in optimism which was not lost on those who witnessed the landing. The same cheerfulness possessed the remaining 1,000 passengers who had chosen their route to Canada via Portland, Maine. Our official party accompanied these from Halifax for the purpose of completing a thorough inspection before their arrival in Portland. The inspection began early on the following morning—Sunday—and the second cabin was crowded to the utmost with those waiting to see the immigration officers. With such a crowd the waiting was of necessity long, but there was no evidence of impatience. Instead, the whole party appeared rather to enjoy the formalities. Singing, which began early, was kept up by the whole party. It seemed as if a week's practice on this trip had developed a big choir and that every individual on the ship was a lusty contributor to a mass of harmony which though ordinarily impressive and enjoyable, was at this time apt to be disconcerting to the officers engaged in the inspection. No one complained, however, and your inspectors worked on until the infectious spirit of the occasion compelled absolute surrender. The music had sent all thought of immigration rules and regulations to the wind. Immigrants and inspectors too were now doing their level best in the refrain of 'Pull for the Shore, Sailors,' and 'There's a land that is fairer than Day.' We were unable to find any misfits in that party which, collectively, was the finest I have ever assisted to inspect.

CHINESE IMMIGRATION.

The inspectors in my district are giving their best attention to their new duties regarding Chinese immigration, the administration of which was on October 2, 1911, transferred from other departments to the Immigration Department.

In conclusion I must express my appreciation of the favourable consideration you have given to my recommendations and of all the department has done to improve the conditions of service of its willing and loyal servants on the border line.

Your obedient servant,

H. G. HERBERT,
Travelling Immigration Inspector.

REPORT OF THE CHIEF MEDICAL OFFICER.

To the Superintendent of Immigration,
Ottawa.

Sir,—I have the pleasure to trnsmit the annual report of the chief medical officer relating to immigration for the fiscal year 1911-12.

The work of medical inspection during the past year has followed closely that for the previous year. All the seaports both on the Atlantic and on the Pacific coasts which are made ports of entry for immigrants are now equipped with officers for their medical inspection and at all there are buildings fairly commensurate with the needs of each port. There has been erected at North Sydney, Cape Breton, which is the port of entry for the tri-weekly steamer from Newfoundland, a neat building with waiting rooms, detention room and offices for the agent and medical officer alongside the Customs wharf, where the work may be done satisfactorily and expeditiously. As most of the immigrants are natives of Newfoundland it is seldom that detentions or rejections are made at North Sydney, now that the indirect entry of southern Europeans via St. John's and thence by railway to Point à Basque has ceased. At South Sydney the occasional admission of undesirables by the ore boats from St. John's has also been stopped through the action of the agent at that port.

The provision for the detention of immigrants at Pacific Coast ports has hitherto been fairly adequate. The hospital building at Victoria is very complete in all respects; that at Vancouver is demanding some new arrangements owing to the extension of the Chinese inspection work, while at Prince Rupert last autumn I made a careful survey of the situation with a view to recommending the most practical method of dealing with the increase of immigration, which may be expected in the near future with the completion of the Grand Trunk Pacific railroad.

With the increase of immigration at the several main ports of entry, it has been found expedient to increase somewhat the medical inspection staff. Hence an extra officer has been appointed at Halifax, five extra officers at Quebec, and a medical officer at Victoria, B.C.

Turning to the results of the work, it may be said, in general terms, that each succeeding year appears to bring a larger proportion of immigrants of the better classes, while the close inspection before being given their passage, of assisted immigrants, tends greatly to lessen the work of eliminating the unfit after arrival at Canadian seaports. In two previous reports reference has been made to the necessity still existing for better and more up-to-date accommodation on some of the vessels carrying immigrants. Old vessels may be excused perhaps in the temporary rush of the opening spring season; but to find as I found on a ship arriving in Halifax in January a wash-room reached only by crossing an open deck covered with six inches of snow and ice and when reached found to have all the fixtures frozen up, cannot be a condition which should longer be tolerated, especially in one of the larger lines having many of the best vessels in the service. Other occasional complaints, regarding poor food and the petty taxing of immigrants by stewards on a certain new line of ships, have been received; but except in the matter of overcrowding and the lack of adequate means for ventilation, the immigrant vessels arriving in Canada to-day show a notable advance on old time conditions. This may be estimated when the total of deaths at sea in a season's immigration are found to be almost negligible as seen in a later table.

The problem of better and more exact medical service on the various SS. lines is still one demanding serious consideration with a view to its solution. It was found in the statistics published in a paper read by Dr. J. D. Pagé, the chief medical officer at Quebec, that the average voyages of medical officers arriving at that port last season were as follows:—

'During the seven months of navigation on the St. Lawrence, we had last year 96 different doctors on 36 vessels; this year, 106 on 44. The small fees of $35 to $50 per month assigned to ships' surgeons, explain sufficiently these frequent changes and render quite vain any hope of amelioration of the inspection on the ships so long as this system of remuneration prevails.'

It is apparent that the remedy for such temporary and therefore unsatisfactory service will only be found in making such positions more permanent by better remuneration. Recalling what has been pointed out by myself in former reports and by every officer having had experience at the ports, that the best time and place for observing the immigrant thoroughly is during the seven or more days of the voyage, it does seem as I have suggested before that nowhere could the department improve its medical work so much as by paying a bonus to ships' medical officers for every voyage made, in which a satisfactory result of their work could be reported by our medical officer at the port of arrival.

Table I.—Showing Total Detentions on Account of Disease, with Rejections, in 1911-12.

Class of Disease.	Cause of Detention.	Number Detained.	Number Released.	Number Debarred.	Number Died.	Number in Hospital.
I. Contagious diseases...	Measles..	3	3	....	....	....
	Erysipelas	3	3	....	....	....
	Mumps	1	1	....	....	....
	Cholera	1	1	....	....	....
	Chickenpox	16	16	....	....	....
	Fever	8	6	1	1	....
	Totals	32	30	1	1	....
II. General diseases	Alcoholism.	5	3	2	....	....
	Tuberculosis	40	20	18	2	....
	Adenitis	1	....	1	....	....
	Rheumatism	5	5	....	....	....
	Anæmia	1	1	....	....	....
	Diabetes	1	1	....	....	....
	Laryngitis..	2	2	....	....	....
	Meningitis	1	....	....	1	....
	Bright's disease.	1	1	....	....	....
	Potts disease.	1	1	....	....	....
	Nephritis	1	....	1	....	....
	Cellulitis of lip.	1	1	....	....	....
	Scoliosis ..	1	1	....	....	....
	Arthritis.	1	1	....	....	....
	Totals	62	37	22	3	....
III. Eye diseases..	Trachoma	187	83	100	....	4
	Conjunctivitis	371	361	3	....	7
	Choroiditis.	1	1	....	....	....
	Defective sight	11	8	3	....	....
	Loss of eye.	1	1	....	....	....
	Ulcer of cornea	3	3	....	....	....
	Keratitis	3	3	....	....	....
	Observation of eyes...	106	102	....	....	4
	Cataract	2	1	1	....	....
	Blindness	2	....	2	....	....
	Acute iritis ..	1	....	1	....	....
	Totals	688	563	110	....	15
IV. Nervous system	Insanity	14	1	13	....	....
	Epilepsy	8	3	5	....	....
	Paralysis	3	....	2	1	....
	Locomotor ataxia....	2	1	1	....	....
	Feeble-minded	47	24	23	....	....
	Observation of nervous system	9	3	4	....	2
	Imbecile	3	1	2	....	....
	Paranoia	1	1	....	....	....
	Tabes dorsalis	1	....	1	....	....
	Totals	88	34	51	1	2
V. Circulatory system .	Heart disease	14	9	5	....	....
	Goitre	7	4	3	....	....
	Blood poisoning	1	1	....	....	....
	Salt rheum	1	....	....	....	1
	Varicose veins	3	....	3	....	....
	Totals	26	14	11	....	1
VI. Respiratory system.	Pneumonia	5	4	....	....	1
	Pleurisy	2	2	....	....	....
	Asthma.	3	2	1	....	....
	Bronchitis	2	2	....	....	....
	Totals	12	10	1	....	1

TABLE I.—Showing Total Detentions on Account of Disease, with Rejections, in 1911-12—*Continued.*

Class of Disease.	Cause of Detention.	Number Detained.	Number Released.	Number Debarred.	Number Died.	Number in Hospital.
VII. Digestive system..	Diarrhoea	1	1	....	....	....
	Appendicitis	1	1	....	....	....
	Gastritis	2	2	....	....	....
	Jaundice	2	2	....	....	....
	Hernia	11	3	8	....	....
	Totals	17	9	8	....	....
VIII. Genito-Urinary system.	Miscarriage	2	2	....	....	....
	Syphilis	4	2	2	....	....
	Pregnancy	6	1	5	....	....
	Confinement	9	9	....	....	....
	Gonorrhoea	2	....	2	....	....
	Chancroid	1	1	....	....	....
	Cystitis	1	1	....	....	....
	Blennorrhagia	1	....	1	....	....
	Metrorbagia	2	2	....	....	....
	Bubonocele	1	1	....	....	....
	Totals	29	19	10	....	....
IX. The skin	Scabies	506	502	1	....	3
	Disease of skin	5	4	1	....	....
	Eczema	8	8	....	....	....
	Impetigo	4	4	....	....	....
	Psoriasis	2	1	1	....	....
	Favus	3	....	3	....	....
	Tinea	14	14	....	....	....
	Pediculosis	2	2	....	....	....
	Xeroderma	1	....	1	....	....
	Totals	545	535	7	....	3
X. Malformations and diseases of old age and infancy.	Abscess	19	12	6	1	....
	Deafness	3	2	1	....	....
	Curvature of spine	2	....	2	....	....
	Senility	7	3	4	....	....
	Totals	31	17	13	1	....
XI. Accidents	Fracture of arm	2	2	....	....	....
	Fracture of leg	2	2	....	....	....
	Lameness	6	4	2	....	....
	Ankle sprained	1	1	....	....	....
	Injured hip	1	1	....	....	....
	Fractured knee	1	1	....	....	....
	Broken leg	2	2	....	....	....
	Loss of leg	1	1	....	....	....
	Cripple	1	....	1	....	....
	Dislocated hip	2	....	2	....	....
	Fractured patella	1	1	....	....	....
	Totals	20	15	5	....	....
XII. Ill-defined causes..	High temperature	95	93	2	....	....
	Physical debility	22	9	13	....	....
	Inflammation of jaw	2	2	....	....	....
	Sore neck	1	1	....	....	....
	Inflammation of arm	1	1	....	....	....
	General observation	21	19	....	....	2
	Diseased hips	1	1	....	....	....
	Seasickness	2	2	....	....	....
	Diseased glands	1	....	1	....	....
	Macrocephalus	1	....	....	....	1
	Totals	147	128	16	....	3
	Grand totals	1,697	1,411	255	6	25

It is of much interest to note that the total of detentions, 1,697, for the year, is less than in the previous year, when it was 1,868; although the total immigration in 1911-12 is 354,237, as compared with 311,084 in the previous year. The difference in the number debarred or rejected is yet more notable, there having been only 255 debarred as compared with 580 for the previous year. As it is fair to assume that the medical inspection by officers at the ports becomes yearly more exact with experience we must conclude that both in type of immigrant arriving and in the greater sifting process both on the continent and in Great Britain is to be found the natural explanation of this satisfactory state of affairs.

The diseases in class I remain as in so many previous years, remarkably few, illustrating better, perhaps, than anything else, since such are so readily diagnosed, the care exercised at ports of departure. Cases of chickenpox are usually from a single case landed and detained for some other cause breaking out in hospital and infecting others before its true nature is apparent. The total 16, made the whole in this class 32, as compared with only 9 last year.

In class II of general diseases, is assembled the largest number of diseases which demand special attention. In the group is tuberculosis, which might perhaps be better placed in class I. The degree of careful medical observation is well gauged by the number detained on account of tuberculosis, it being 40 as compared with 21 in the preceding year. The other diseases of the group are few, 5 from rheumatism being the largest.

In class III, including all eye diseases, it is gratifying to note that the detentions of 1,030 for last year have been reduced to 688; those from trachoma from 463 to 187; from conjunctivitis, 226, increased to 371, and for observation of eyes decreased from 308 to 106. On the very great decline of true trachoma is to be found a quite remarkable decline in cases rejected, these for the group having fallen from 352 to 110 and for trachoma from 259 to 100. This lessening of trachoma must fairly be attributed to the close examination of continental immigrants before taking passage, since of the Austro-Hungarian group there were 21,651 this year as compared with only 16,285 last year and 9,805 Russians as compared with 6,621 in the preceding year. It is further noted that while the total British are 138,121 as compared with 123,013 last year or an increase of 15,108, the above fact is all the more remarkable as the increase in Austro-Hungarians this year is 5,366 and 3,184 of Russians. The Hebrews, in whom many cases of trachoma formerly were found, are much the same as last year, being 5,322, as compared with 5,146. The Syrian group has become almost a negligible quantity.

With class IV, dealing with nervous diseases, giving 88 as compared with 107, we must affirm once more our belief in great care being exercised in inspection in foreign countries; but the fact that 133 have been deported during the year for insanity, after being admitted to Canada indicates some measure of disregard of the warnings given against the emigration of persons with insane tendencies. There were, however, 14 detained for insanity as compared with 11 last year and 47 for feeble-mindedness as compared with 58, while 24 were rejected as compared with 22 in the previous year. There were 5 epileptics debarred as compared with 8 in the previous year.

In class V, diseases of circulation, as we would expect in a class of population almost all in the earlier half of life, few diseases of this class are found. There were but 26 as compared with 44 last year, and only 11 debarred as compared with 39 last year.

In class VI, including diseases of respiration, only 12 were detained, as compared with 59, and but 1 debarred as compared with 18 last year.

Similarly in class VII, diseases of the digestive system, the total detained was but 20, and 8 debarred, as compared with 35 and 20 in the previous year.

In diseases in class VIII very few were detained; but in class IX, including skin diseases, the cases of scabies, occurring especially in Chinese at Pacific ports, increase very notably the number of those detained. Simple treatment being possible, only 7 were deported, three of these on account of favus, as compared with 6 last year.

In classes X and XI, their obviousness always keeps these diseases few in number. However, 13 were debarred in the first and 5 in the second as compared with 18 and 4 last year.

Grouped together in class XII are ill-defined diseases, most being grouped under fever and physical debility. That but few were debarred indicates that they were for the most part readily curable or temporary ailments.

Naturally following the detentions for the fiscal year, some remarks upon the total detentions from 1902 to 1911-12 inclusive may not be without interest.

While the causes are many, it will at once be seen that the chief cause of detention during the past ten years of inspection* has been from trachoma, the total being 2,727. The three other principal causes were: *Lack of Funds* (1,471), *Liable to become a Public Charge* (1,712), and *Stowaways* (509). It will be noted that medical causes, except many of the L.P.C. cases, which frequently included physical defectives, constitute almost three-fourths of the total 8,500 rejections for 113 causes. Altogether 92 were rejected at the ports for insanity and 96 on account of tuberculosis; 66 for defective vision and 113 for poor physique; 40 for epilepsy and 25 only for feeble-mindedness or imbecility. If we are to take the total as representing effective inspection, it would then seem that the total rejections in so large a number of immigrants represents but a very small fraction, and Canada must be credited with having received a population probably superior to an equal number in any given population in the country.

The rejections by nationalities is of some interest since it represents the relative positions from the physical, moral and financial standpoints of different nationalities of immigrants. It will be seen that notably the largest number was of Italians, especially in the three last years when a special money qualification was demanded. These indeed were the years of the largest number of rejections for almost every class. In it Bulgarians, Syrians, Armenians, Greeks and Turks figure the highest, if the percentage of Russians and Russian-Hebrews to the total immigration is worked out.

There is no better illustration of a steady persistence of good qualities than the small number relatively of Galicians, Ruthenians and Austrians rejected. Of orientals the Hindoos and Japanese both show a large proportion of rejections. Had there been no definite provision in the Immigration Act for deporting immigrants after admission, the history of this great mass of humanity in Canada could not in any great degree be written. But with the provision for deportation within two years of admission in the Act of 1906, the fortunes and character of these immigrants have been an open book. It will be noted that 5,626 have been deported as compared with 8,500 rejected at ports of entry, during the ten year period. Of all causes, that of becoming a public charge has been by far the greatest. The next most notable cause was criminality, and the year 1911-1912 far exceeds any other year in this respect.

Next in importance and number is the number of deported insane persons. Contrasted with the total in a native population the 648 insane deported out of a total of 2,002,184 immigrants admitted during the ten years would appear almost exactly the same rate per 1,000 as was found in the old population of the eastern provinces in the census of 1901. This, however, is not a correct comparison, since from the first year, 1901, to the last year, there have been the lives of immigrants of the first year continuing for the ten years; these of 1902 continuing for the nine years, and so on until the last year 1911-12, so that the years of this population are many more as a total than that of a single census year. What burden, however, Canada as a whole has been relieved of may be estimated when it is understood that not more than 25 per cent of an ordinary insane population are curable while the average years in asylums in Canada for the incurable insane before they die approximate thirteen.

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* Table of total detentions 1902 to 1911-12 will be found elsewhere in Report on Immigration, page 63.

The total deported for tuberculosis is but 271, which, remembering its prevalence in any ordinary community per 1,000, indicates a really small number, slightly more than 0·23 per 1,000. To these we may add 226 for general debility and 133 for mental weakness, both marking the inevitable amount of human wreckage in any number so great as the total immigration. That the total is small is seen in the total deportations being found to be 0·28 of one per cent in 1,978,379.

It will be noted that the total deportations for 1911-12 are greater than in the previous year by 175, or rather more proportionately than is accounted for by the greater number of immigrants. As already noted these were for the most part for non-medical causes.

Comparing the medical causes for deportation we find them approximating those for the last two years.

TABLE Showing total Deportations on account of Disease for three years.

—	1909-10.	1910-11.	1911-12.
Abscess	2	2	2
Alcoholism	0	9	5
Adenitis	0	1	0
Asthma	0	2	1
Blindness	0	0	2
Cancer	0	1	2
Catarrh	0	1	0
Crippled	0	0	2
Cystitis	1	0	0
Eczema	6	0	0
Epilepsy	8	10	10
General debility	27	1	1
Hernia	0	2	1
Heart disease	4	3	3
Insomnia	1	0	0
Injured	1	0	0
Idiocy	2	0	0
Imbecility	1	0	0
Insanity	95	121	133
Mental weakness	9	17	9
Malaria	2	0	0
Muscular atrophy	2	0	0
Neurasthenia	0	1	1
Nostalgia	0	1	0
Paralysis	3	2	1
Rheumatism	8	2	7
Senility	3	1	0
Trachcoma	2	8	0
Tuberculosis	30	33	39
Venereal disease	2	2	2
Varicose veins	0	0	2
	209	220	223

As remarked in a previous report a scrutiny of the table shows how slight are the changes in the causes of deportations in successive years; only in two cases will be found any marked increase, there having been 133 as compared with 121 cases of insanity deported, and 39 as compared with 33 cases of tuberculosis.

Previous reports have contained extended remarks regarding insanity, the chief point of interest being that in spite of a careful scrutiny of incoming immigrants a fraction in every year, or about 1 in every 3,500 immigrants, passes unobserved and later develops symtoms of insanity. Any study made of these in hospital has failed to prove more than a fair proportion as having had previous attacks, and it is only fair to assume that if in every 1,000 of the native population, three persons are insane, it is not too much to expect that 2/5 of one in every 1,000 should develop insanity the year after arrival, in 350,000 immigrants.

Much the same class of remarks could be made regarding the 39 cases of tuberculosis deported; but as has been elsewhere remarked when authorities on the diagnosis of tuberculosis in our several communities remark that the ordinary physician would seem to require a special course in the diagnosis of tuberculosis, judging from the number of cases overlooked in ordinary practice, it must at once be confessed that anything less than an individual detailed examination of every immigrant arriving will fail to prevent an occasional case finding admission. The point may be illustrated from the fact that two sisters arriving in November last were both in hospital in Ottawa within a fortnight of their arrival, one suffering from an acute bronchial attack and the other discovered to be in the early acute stage of tuberculosis. A certificate from a qualified English physician asserted both were in good health just before leaving, and indeed neither had been out of work at all nor had either, according to any evidence available, ever been ailing on account of chest disease. Yet more recently an English immigrant sent out to farm with the idea of improving his health worked four days and within two weeks was in the Tuberculosis Dispensary at Montreal. This young man, looking fairly well on arrival, after a week on deck in the sun, had within this time come to show the high fever and rapid pulse of active tubercular disease.

A prominent Canadian authority referring to the magnitude of the tuberculosis problem says:—'It is evident that the disease is enormously frequent in any civilized community, affecting at some time almost everybody, but it by no means follows that what may be regarded as a biological implantation will in all cases give recognisable clinical manifestations.'

In the summary of diseases reported regarding which official action has been taken, it is interesting to note that by far the largest number of deportations has taken place from Ontario, although the largest increase in population as shown by the census is in the prairie provinces.

Thus the increases were—

Ontario	340,261	
Alberta	301,641	903,197
Saskatchewan	401,153	
Manitoba	200,403	

or nearly three times, while the deportations were for the ten years:—

Ontario	2,477
The western provinces	1,378

During the same period 707,745 United States immigrants entered Canada, or roughly seven-nineteenths of the total, and if we are to judge of the quality of the immigrants we are getting by the number deported it is surely a mark of high quality that while the total deportations for all nationalities were 0·28 per cent, for English 0·53, Scotch 0·30 and Irish 0·38, for Americans the percentage was only 0·08.

Remembering the very large volume of this migration from the United States, so high in quality, measured from the health standpoint, which here is intimately associated with the social standpoint, it becomes a pleasing prospect to think that judging by analogy from the progress of the immigrants to the Western States during the past fifty years, so many of their children, many of them of hardy German, Scandinavian or Russian descent, are entering Canada at the present time, and we may expect that an even less period will show the children of these and other races who have come direct from their own countries to Canada to have advanced under more favourable climatic and agricultural conditions, better laws and perhaps high social environment to at least an equally high degree of educational advancement, social progress and financial prosperity.

Your obedient servant,

P. H. BRYCE,

Chief Medical Officer.

PART III

SURVEYS

SURVEYS

REPORT OF THE SURVEYOR GENERAL.

DEPARTMENT OF THE INTERIOR,
TOPOGRAPHICAL SURVEYS BRANCH,
OTTAWA, August 14, 1912.

The Deputy Minister of the Interior,
Ottawa.

SIR,—I have the honour to submit the following report of the Topographical Surveys Branch for the year ended March 31. 1912.

Surveys were continued throughout the year in the western provinces, and subdivision was extended northerly into the Peace River block. Seventy-six parties were employed but only seventy-three of these worked the whole season, three parties being engaged for a short time only. The surveyors working under contract numbered thirty-four and were engaged on subdivision and timber berth surveys while the forty-two employed by the day were engaged on subdivision, resurvey and miscellaneous work of various kinds.

The spring and early summer of 1911 was abnormally wet and was the cause of much delay as surveyors had much difficulty in reaching the scene of operations. The surveyors report that the continued wet weather affected the proper ripening of the grain and that some low grade wheat was produced by being cut before it was properly ripened in order to escape frost.

The following statement shows the average number of miles of survey for each party during the last four years:—

1908	366 miles.
1909	412 "
1910	279 "
1911	280 "

One hundred and sixty-six whole townships and eight fractional townships were completely subdivided while a partial subdivision was made of three hundred and thirty others, and a resurvey either partial or complete was made of two hundred and twenty-five others.

The distribution of these parties by provinces is shown in the following table:—

—	In Manitoba.	In Saskatchewan.	In Alberta.	In British Columbia.	Partly in one province and partly in another.	Total.
Paid by the day	3	3	12	6	15	39
Under contract	3	16	13	—	2	34
Parties engaged for a short time only	1	—	—	1	1	3
Totals	7	19	25	7	18	76

SURVEY OF BLOCK OUTLINES.

Seven surveyors were employed in running base lines and initial meridians in Manitoba, Saskatchewan and Alberta while three others were similarly employed in the Peace River block.

Mr. T. H. Plunkett, D.L.S., completed the survey, levels and building of mounds along portions of the fifth meridian and the twenty-eighth and twenty-ninth base lines west of the fifth meridian. These lines were run in 1910 by Mr. W. A. Ponton, D.L.S., but the ground was so wet that mounds could not be built. Mr. Plunkett reports last season's rains as being the heaviest in twenty years, but he succeeded in getting the low-lying portions of the lines mounded before the heavy rains set in.

The twenty-second base line was run west from the fifth meridian one hundred and twenty miles by Mr. A. H. Hawkins, D.L.S. He lost twenty days through wet weather and reports rain on ninety days out of one hundred and fifty-eight. The base line runs through fairly level country which has been overrun by fire and could be cultivated without very much expense in clearing. No hills over one hundred feet high were encountered on the line.

Mr. G. H. Blanchet, D.L.S., ran the twenty-third base line from the fourth to the fifth meridian. Upon the completion of this work he moved directly to the nineteenth base line between the same meridians and began the production of this line west from range 5.

Latitude observations were taken on the principal meridian and on the fourth meridian by Mr. J. A. Fletcher, D.L.S. The correct survey of the initial meridians is of the utmost importance as it is from these the base lines, which govern the township subdivision, are run. The southern portions of the meridians were run a number of years ago when the degree of accuracy under which work at the present time is done, could not be obtained by surveyors with the equipment at their disposal. Latitude observations were, therefore, necessary to detect and correct errors which might have occurred in the original surveys. Observations were taken at two places on the principal meridian, on the north shore of lake Winnipeg in township 48 and on the south shore in township 35. On the fourth meridian observations were also taken at two places in township 89 at the crossing of Clearwater river and in township 62 on the south shore of Cold lake.

Part of the seventeenth base line west of the third meridian was run by Mr. A. Saint Cyr, D.L.S. He also made a restoration survey of part of the fourth meridian south to the sixteenth base as the end of the seventeenth base fell in Cold lake and closing had to be effected on the adjoining base line. The country crossed by the seventeenth base line is fairly well wooded east of the crossing of Beaver river, but west from the river it is low and swampy.

Mr. E. W. Robinson, D.L.S., surveyed a portion of the second meridian and ran a portion of the fifteenth base line westerly therefrom. Along the second meridian the land is low and swampy while muskegs are numerous. They have, however, a hardpan bottom and none of them are of the floating variety. Although the temperature was at 80° Fahr. frost was encountered when digging the pits as the dry mossy surface absorbs the heat and acts as a very efficient non-conductor. With cultivation and drainage, however, this disadvantage will doubtless disappear.

Mr. A. W. Ponton, D.L.S., surveyed the principal meridian from the thirteenth to the sixteenth base line. He reports the country through which the line runs to be low, wet and swampy, with occasional outcroppings of rock. The surface, though mostly covered with trees of small dimensions is composed of black vegetable muck unsuited to agriculture.

Portions of the fourth meridian and of the twenty-fourth base line westerly therefrom were run by Mr. J. B. McFarlane, D.L.S. The fourth meridian was produced north to township 103. From township 95 north the soil is nine-tenths sandy with jackpine and small muskegs. Fires sweep over this district about once every decade as the muskegs are not large enough to stop them. The country is not adapted to agriculture on account of the sandy nature of the soil, and rain, though fairly plentiful, falls generally in small drizzly showers.

SURVEYS IN THE PEACE RIVER BLOCK.

The Peace River block is a rectangular tract of land containing 3,500,000 acres. It is situated in British Columbia adjoining the Province of Alberta and was granted to the Dominion by the Province of British Columbia in exchange for land in the railway belt which had been disposed of by the province before the belt was placed under Dominion control. It was selected after an exploration by Messrs. J. A. Macdonell and J. A. Belleau in 1905-06, but the outlines had never been run to define its exact location. The survey of these outlines was a somewhat difficult undertaking.

During the past season four surveyors, Messrs. J. R. Akins, D.L.S., Geo. McMillan, D.L.S., O. Rolfson, D.L.S., and L. Brenot, D.L.S., were employed in outlining the block and running base lines across it.

Mr. Akins ran the north boundary and assisted Mr. Brenot to complete the west boundary. He experienced great difficulties in transportation as the snow was deep till late in the spring. Unless a surveyor is on the ground early he cannot accomplish much work, the summer season being short in these high latitudes.

Mr. McMillan ran the twenty-first base west across the block. He was assisted on the western portion by Mr. Brenot and on reaching the western boundary Mr McMillan ran the portion south to the southwest corner of the block while Mr. Brenot ran the portion north. Mr. McMillan had set out for the survey of the base line as early as February and he experienced some very cold weather, the thermometer registering as low as —55° Fahr. but towards the end of March the weather moderated sufficiently to allow of the commencement of operations.

Mr. Rolfson ran the twenty-second base line across the block. He also experienced much difficulty in the transportation of supplies as the ice on Peace river west of Dunvegan was not strong enough to carry freighters owing to the swift current in the river. The country crossed by the base line is fairly well woooded although there are occasional open patches of scrubby prairie.

A report on the surveys in the Peace River district containing a description of the country, surveyors' reports on townships and general information has been published in pamphlet form.

INSPECTION OF CONTRACT SURVEYS.

Surveys which are executed under contract must pass a rigid examination before being accepted. Five inspection parties under Messrs. P. R. A. Belanger, D.L.S., C. F. Miles, D.L.S., E. W. Hubbell, D.L.S., L. E. Fontaine, D.L.S., and G. J. Lonergan, D.L.S., were employed on inspection work during the past season. They also performed small miscellaneous surveys which happened to be in the vicinity of their work. It may be worthy of note that it was necessary to send an inspector into the Peace River district for the first time, to examine contract surveys. This shows at what a rapid rate settlement is advancing. Some of the townships inspected lie over 300 miles from the nearest railway.

Mr. Belanger inspected contract surveys in Manitoba and made some subdivision and traverse surveys at Pointe du Bois on the Winnipeg river. He also surveyed a small settlement at Fisher Bay, the lots of which are all occupied by half-breed fishermen.

The inspection of contracts in Saskatchewan was done by Messrs. Miles and Hubbell, in the northwestern and north central portions respectively. Mr. Miles also made several miscellaneous surveys in the vicinity of his inspection work and subdivided a portion of the Cold Lake Indian reserve which was transferred to this department by the Department of Indian Affairs.

Messrs. Fontaine and Lonergan were employed on inspection work in western and northwestern Alberta respectively. Mr. Lonergan's work extended into the Peace River district as twenty-eight townships were subdivided there under contract last year.

BRITISH COLUMBIA SURVEYS.

Surveys in the railway belt were continued under Messrs. W. J. Deans, D.L.S., J. E. Ross, D.L.S., C. H. Taggart, D.L.S., A. Lighthall, D.L.S., and A. V. Chase, D.L.S.

Mr. Deans completed several miscellaneous surveys and traverses; he also surveyed a number of timber berths north of Vancouver.

Mr. Ross subdivided land in the district south of Kamloops, while Mr. Taggart was employed on miscellaneous surveys north of Kamloops.

Mr. Lighthall did some levelling at Woodhaven on Bedwell bay in order to determine if the slopes would permit of changing the courses of some of the roads. He was also engaged on subdivision survey, timber berth survey and delimitation of a portion of the railway belt.

The examination of vacant lands in the Kamloops district, for purposes of classification into fruit land, farming land, grazing land, timber land and worthless land was continued by Mr. Chase. He also performed some miscellaneous subdivision in the vicinity of Lytton.

TOWNSHIP SUBDIVISION SURVEYS.

Subdivision surveys which were carried on in five hundred and four townships were executed by surveyors working under contract and also by some surveyors working under daily pay in localities where contract rates would not apply.

Some miscellaneous subdivision at The Pas in northern Manitoba was done by Mr. A. L. MacLennan, D.L.S. He also surveyed a booming site on Carrot river applied for by the Finger Lumber Co.

Messrs. W. A. Scott, D.L.S., and J. Francis, D.L.S., were engaged on miscellaneous subdivision and surveys of coal claims in southwestern Alberta.

Mr. C. M. Walker, D.L.S., made a survey of land required for power purposes on Elbow river and subdivided portions of townships in southwestern Alberta.

Subdivision of lands through which the Alberta Coal branch of the Grand Trunk Pacific railway runs and surveys of coal claims in the same vicinity were made by Mr. A. L. McNaughton, D.L.S.

CORRECTION, RESTORATION AND MISCELLANEOUS SURVEYS.

Mr. A. L. Cumming, D.L.S., retraced two townships in the Cypress Hills in order to determine the true bearings of the lines and to renew the monuments, replacing the old wooden posts by iron posts. He also made several small miscellaneous surveys in southern Alberta.

Mr. P. B. Street, D.L.S., subdivided some lands in the foot-hills of the Rocky mountains in southwestern Alberta in order to enable the department to dispose of some coal lands and mineral claims near Pincher creek. He also made several miscellaneous surveys in this vicinity and traversed a portion of Icelandic river in eastern Manitoba.

A correction survey of several townships in central Alberta was done by Mr. H. Matheson, D.L.S. These townships were partly subdivided under contract in 1908, and owing to difficulties in securing supplies the contractor did not complete the subdivision. Although the contractor was requested to return and finish the work, it was never satisfactorily done and Mr. Matheson was instructed to complete it.

Mr. C. F. Aylsworth made a subdivision into lots of the land around Max lake in Turtle Mountain forest reserve and Fish lake in Moose Mountain forest reserve for summer resort purposes.

Mr. C. Rinfret, D.L.S., destroyed duplicate monuments in a number of townships subdivided in 1883 in the vicinity of Moosejaw. He also resurveyed some townships near Maple Creek and towards the close of the season performed a number of miscellaneous scattered surveys.

Messrs. G. A. Bennett, D.L.S., E. S. Martindale, D.L.S., and R. C. Purser, D.L.S., were engaged on miscellaneous scattered resurveys, correction surveys, traverses and investigation of reported errors in Manitoba, Saskatchewan and Alberta.

Settlement surveys were made by Mr. H. S. Day, D.L.S., along the Athabaska at Pelican, Grand Rapids, McMurray, McKay and Chipewyan.

Mr. P. A. Carson, D.L.S., made a stadia traverse of a portion of North Lillooet river.

Mr. A. W. Ashton, D.L.S., surveyed a cemetery site near Blairmore and also performed some miscellaneous surveys near Lytton.

An investigation of old surveys near Deloraine which was urgently required was made by Mr. T. S. Nash, D.L.S., of the office staff.

Messrs. W. T. Thompson, D.L.S., and H. K. Moberly, D.L.S., were employed on the survey of timber berths.

The easterly portion of the triangulation survey in the railway belt was retraced by Mr. M. P. Bridgland, D.L.S. He renewed the monument at station I on the fifth meridian, erected by Mr. W. S. Drewry, D.L.S., in 1890, and reestablished all the stations westerly to the summit of the Rockies. He also connected the triangulation with the monuments of the Dominion Lands system, wherever possible, and, although he failed to locate the monuments on the sixth meridian, as they had been destroyed by fire and lumbering operations, he found the nearest existing monument two miles farther west and tied it to the triangulation. A thoroughly reliable tie has thus been established by means of the triangulation between the fifth and sixth meridians. Mr. Bridgland also investigated surveys west of Calgary.

Mr. J. N. Wallace, D.L.S., who is in charge of levelling operations ran lines northerly from Prince Albert and Lloydminster. This survey was necessary to connect the levels already taken along the third and fourth meridians and adjoining base lines with the elevations along the railway which are at present the only available source of information in the western provinces regarding sea-level. The line of levels run northerly from Prince Albert is thirty miles while that northerly from Lloydminster is eighty-three miles.

YUKON SURVEYS.

Mr. F. H. Kitto, D.L.S., a member of the Topographical Surveys staff at Ottawa, was sent to Dawson to take charge of the survey office of the Yukon Territory upon the resignation of the former director.

Under the direction of the Commissioner of the Yukon Territory, Mr. Kitto undertook the reorganization of that office, in addition to the routine work which consists of giving information to the public, making blue-prints, tracings and sketches, mounting maps, writing descriptions, correspondence, examining and filing of plans and field notes.

At the request of the Commissioner, group lots and placer claims were surveyed by Mr. Kitto, and the revenue derived therefrom was transferred to the revenue of the Yukon Territory.

Alterations were made in the layout of the office and the lighting overhauled and improved.

In addition to the routine and reorganization work of the office, Mr. Kitto carried on a triangulation survey from Dawson up Klondike river about thirty miles. He also spent eighteen days in the field looking up various locations of trails, base lines and lot posts, for the information of the Territorial and Gold Offices.

Mr. H. G. Dickson, D.L.S., completed his survey under contract of the Carmack's reference traverse from the Nordenskiold valley to Jarvis creek in the Kluane District.

The staff of his office consists of three draughtsmen.

PHOTO-TOPOGRAPHIC SURVEYS.

Mr. Arthur O. Wheeler, who was formerly topographer on the surveys staff and is now director of the Alpine Club of Canada, made a photo-topographic survey of Mount Robson and the mountains of the continental divide north of the Yellowhead Pass on the Grand Trunk Pacific Railway. This survey was undertaken for the Grand Trunk Pacific Railway Co., the British Columbia and Alberta Governments and the Alpine Club. Mr. Wheeler offered to place the results of the survey at the disposal of the Department of the Interior provided the Department would assist by the loan of surveying instruments, by furnishing, developing and printing the photographic plates and by preparing the map for photo-lithography. The map, which contains much valuable information, obtained at a trifling cost, on a region hitherto unexplored, accompanies the report of the branch.

STATEMENT OF MILEAGE SURVEYED.

The following is a comparison of the mileage surveyed each year since 1909:—

Nature of Survey.	April 1, 1909, to March 31, 1910.	April 1, 1910, to March 31, 1911.	April 1, 1911, to March 31, 1912.
	Miles.	Miles.	Miles.
Township outlines	2,089	2,376	2,041
Section lines	16,326	11,849	10,098
Traverse	2,413	2,758	2,577
Resurvey	3,876	906	2,317
Total for season	24,704	17,889	17,033
Number of parties	60	64	61
Average miles per party	412	279	280

The following tables show the mileage surveyed by the parties under daily pay and by the parties under contract:—

WORK OF PARTIES UNDER DAILY PAY.

Nature of Survey.	April 1, 1909, to March 31, 1910.	April 1, 1910, to March 31, 1911.	April 1, 1911, to March 31, 1912.
	Miles.	Miles.	Miles.
Township outlines	861	1,178	992
Section lines	1,066	1,487	823
Traverse	1,324	462	498
Resurvey	3,808	835	2,237
Total for season	7,059	3,962	4,550
Number of parties	34	30	29
Average miles per party	208	132	157

WORK OF PARTIES UNDER CONTRACT.

Nature of Survey.	April 1, 1909, to March 31, 1910.	April 1, 1910, to March 31, 1911.	April 1, 1911, to March 31, 1912.
	Miles.	Miles.	Miles.
Township outlines	1,228	1,198	1,049
Section lines	15,260	10,362	9,275
Traverse	1,089	2,296	2,079
Resurvey	68	71	80
Total for season	17,645	13,927	12,483
Number of parties	26	34	32
Average miles per party	679	410	390

Owing to the nature of their work, fifteen parties are not included in the statement of mileage for the year ended March 31, 1912.

COST OF SURVEYS.

The following statement shows the average cost per mile of surveys executed by surveyors under daily pay and by surveyors under contract:—

——	Surveyed under daily pay.	Surveyed under contract.
Total mileage surveyed	4,550	12,483
Total cost	$380,943	$334,304
Average cost per mile	$83.72	$26.78

RECIPROCITY AMONG SURVEYORS.

As the outcome of a conference of surveyors held in Melbourne in 1892, the examination of land surveyors in New Zealand and in the several States of Australia is conducted by a common examining board and the surveyors who are admitted have the right to practise their profession in all parts of Australia and New Zealand.

In 1900, a formal invitation was received from the New Zealand Institute of Surveyors to join in this arrangement on behalf of Canada. Some correspondence was also exchanged with the Surveyor General of New Zealand on the same subject. It was explained to them that the surveyors of each Canadian province had formed associations which were incorporated by the provincial legislatures, and that there was no reciprocity among these different bodies. There was little prospect of joining Australia and New Zealand in reciprocal arrangements before such arrangements were made between the several Canadian associations.

At the Colonial conference of 1907, a motion was submitted by the Governor of New Zealand for establishing reciprocity among land surveyors throughout the empire. The motion was discussed and adopted after amendment. It states that it is desirable that reciprocity should be established and commends it to the favourable consideration of the several governments.

In order to be admitted as a Dominion Land Surveyor, it is necessary to pass a preliminary examination for admission as a pupil. After three years' service, the pupil is entitled to present himself for final examination for a commission as a Dominion Land Surveyor. At the time of the Colonial Conference (1907), the law authorized a land surveyor licensed in any part of the empire to present himself for final examination as a Dominion Land Surveyor after one year's service, without having to pass the preliminary examination.

In 1908, the Dominion Lands Surveys Act was passed by Parliament. Advantage was taken of the occasion to introduce an amendment with a view to giving effect to the desire expressed by the Colonial Conference if satisfactory arrangements could be made. The amendment authorized the Board of Examiners if they considered it advisable to do so, to dispense with the final examination of land surveyors from any particular part of the Empire. This amendment was strongly objected to in the Senate on behalf of the Ontario and Quebec land surveyors. Not only was the amendment withdrawn, but the whole section was struck out. Land surveyors from elsewhere than Canada have no longer any special privileges under the present law.

Representations against the new law were made by the Surveyors' Institution of Great Britain, who brought the matter to the attention of the Colonial Office. At their instance, His Majesty's Government invited the Dominion, Commonwealth, State and Provincial Governments to a conference of the Surveyors General of the Colonies, to be held in London on October 24, 1910. The invitation was accepted by the Dominion Government, but declined by all the Provincial Governments in Canada. It was also declined by Newfoundland and by the Union of South Africa. The Commonwealth of Australia, the Australian States and New Zealand asked a postponement of the date of the conference, which was accordingly fixed for the 30th May, 1911.

The delegates at the conference were:—Right Hon. Sir George Reid, P.C., G.C.M.G., K.C., High Commissioner for Australia, representing the Commonwealth; A. A. Spowers, Surveyor General of Queensland, and E. A. Counsel, Surveyor General of Tasmania, representing New Zealand and the Australian States, with the exception of South Australia; E. Deville, LL.D., representing the Dominion of Canada; Col. S. C. N. Grant, C.B., C.M.G., R.E., Director General of the Ordnance Survey, A. Siemens, President, and five other members of the Institution of Civil Engineers; W. Edgar Horne, M.P., President, and five other members of the Surveyors' Institution.

The proceedings were opened by Lord Lucas, Under Secretary of State for the Colonies. Colonel Sir Duncan Johnston, K.C.M.G., C.B.R.E., late Director General of the Ordnance Survey, was elected chairman, and Mr. A. Goddard, secretary to the Surveyors' Institution, undertook the duties of secretary.

In order that the position of Canada should not be misunderstood, the Surveyor General of Dominion Lands at the first meeting submitted the following statement:—

When the Canadian Confederation was formed, in 1867, there were two Licensing Boards for Land Surveyors: one in Toronto, for the Province of Ontario, and one in Quebec, for the Province of Quebec. The requirements of the two boards were very much alike, *viz.*, a preliminary examination, three years' service as a pupil under articles, and a final examination. By the British North America Act, property and civil rights had been placed under the control of the provinces: no one was allowed to make land surveys unless he was a Provincial Land Surveyor.

At that time, the Northwest Territories were bought by the Dominion Government from the Hudson's Bay Company. These lands being the property of the Dominion and outside of the provinces, were not under provincial control, but provincial land surveyors were at first employed for their subdivision because no others were available. In 1872, the need of better control over the surveyors of Dominion lands led to legislation creating Dominion Land Surveyors and a board of examiners for their admission. All Provincial Land Surveyors in 1872 were made Dominion Land Surveyors by the new Act. For some years there was reciprocity between the three boards, but as each one was acting independently, grave abuses arose, and the arrangement was discontinued.

Meanwhile, the Province of Manitoba had been formed out of a part of the Northwest Territories. The Ontario and Quebec Land Surveyors had each the exclusive right to make land surveys within their own provinces; likewise the Dominion Land Surveyors had similar rights within Manitoba and the Northwest Territories. The other provinces had no licensed surveyors and the practice of the profession was free.

After 1883, there was a period of dullness in the land business in Manitoba. In order to improve their prospects, the Dominion Land Surveyors of Manitoba formed an association, were incorporated by their legislature as Provincial Land Surveyors, and given the exclusive right to make land surveys within the province. This was later resented by the Dominion Land Surveyors of the adjoining Territories, who were turned away at the boundaries of Manitoba, while those Manitoba Land Surveyors, who were also Dominion Land Surveyors, could freely practise within the Territories. As soon as the Provinces of Saskatchewan and Alberta were formed, their Dominion Land Surveyors retaliated by obtaining drastic legislation incorporating land surveyors associations in each province and excluding all other surveyors. This legislation practically abolished Dominion Land Surveyors as a profession, these two provinces being the last ones where they could practise land surveying. At present, they can only act as employes of the Dominion Government. It follows that although the Surveyor General of Canada is a delegate to the Conference, he does not actually represent any branch of the surveying profession of Canada.

The first proposal of reciprocity was made to Canada at the time of the negotiations betweeen New Zealand and Australia, by Mr. Marchand, then Surveyor General of New Zealand. The Surveyor General of Canada replied that personally he was in favour of the proposal, but it was not until 1908 that an opportunity was found of giving effect to this suggestion. In that year the law respecting Dominion Land Surveyors was recast, and an amendment was introduced authorizing the Board of Examiners to enter into reciprocal arrangements with other parts of the empire. This amendment was strongly objected to by the Ontario and Quebec surveyors: the opposition in Parliament was such that the government withdrew not only the proposed amendment but also a previously existing clause granting certain privileges to surveyors from other parts of the empire. In view of the strong objections of the Canadian surveyors to any proposals of reciprocity, and of the fact that it does not even exist amongst themselves, it seems that there is little prospect of the immediate adoption by them of the wider scheme of reciprocity throughout the empire.

While recognizing the difficulties which stood in the way, the consensus of opinion among the delegates was that they had been called together for the purpose of preparing a scheme of reciprocity and that it was their duty to prepare such a scheme. The recommendations agreed upon contemplate uniform examinations, the syllabus of which was drafted by the Conference, similar terms of service everywhere and the creation of a central board to hear appeals against any of the local examining authorities. The Conference's report concludes as follows:

'The free discussion which has taken place at the Conference does not permit the delegates to overlook the difficulties which undoubtedly exist in the way of a general agreement for reciprocity; and although they are conscious that the scheme they have formulated will not provide a complete answer to every objection which can be raised, they venture to submit it as offering a groundwork for a future agreement among the dominions, provinces or states who desire to enter into reciprocal arrangements. Should any governments not find it practicable to accept in its entirety the scheme herein submitted, it may be that they will be able to adopt such parts of it as their circumstances permit. Even if a part only of the examinations for qualifying as surveyors should be accepted throughout the Empire, so that a candidate who had passed that part of the examination in any portion of the Empire would be excused having to undergo it again, in order to qualify as a surveyor in another portion of the Empire, a step forward would be made. In particular, the delegates wish to emphasize the importance they attach to the formation of the central board.'

CORRESPONDENCE.

The correspondence of this branch consisted of:—

Letters received	11,675
Letters sent	16,120

ACCOUNTS.

Number of accounts dealt with	1,024
Amount of accounts	$943,386
Number of cheques forwarded	3,068

OFFICE STAFF.

The office staff of the Topographical Surveys Branch at Ottawa consists of one hundred and twenty-seven employes, being an increase of one over the staff of last year.

Fifteen appointments were made, one employe was superannuated, nine resigned, while four were transferred to other branches of the Department.

The appointments were:—Messrs. W. B. Armstrong, J. E. Spero, L. A. Nevins, J. F. McDonald, A. S. Thomas, H. C. Smith, G. N. Clarke, A. G. McLennan, G. H. Watt, G. A. Colquhoun, J. J. Freeland, W. H. Herbert, H. Parry, R. C. Ross and L. G. Smith. Mr. P. B. Symes was superannuated, Messrs. J. E. Umbach, R. C. McCully, C. P. Dubuc, C. M. Ross, A. H. Beaubien, H. Osmond, C. M. Hoar, J. Fredette and B. J. Roe resigned, while Mr. J. A. Belleau was transferred to the Lands Patents Branch, Mr. A. M. Grant to the Chief Astronomer's Branch, Mr. A. Tremblay to the Railway Lands Branch, and Mr. C. E. Marchand to the Geographer's Branch.

Mr. Symes, chief draughtsman, who, on account of continued ill-health, was superannuated after more than forty years of service, was connected with the branch since its inception in 1873. He was a very valuable officer and had an intimate knowledge of the work, having materially assisted in the growth of the branch from a small office in the Department of the Secretary of State to its present large dimensions. His unfailing courtesy and patience in his relations with the staff made his retirement a matter of general regret. The position of chief draughtsman, rendered vacant by his superannuation, was filled by the promotion of Mr. T. Shanks, B.A. Sc., D.L.S., formerly assistant chief draughtsman. Mr. T. E. Brown, B.A., has been appointed to this latter position and the place formerly held by him, that of chief of the first section, was filled by the promotion of Mr. H. G. Barber.

CHIEF DRAUGHTSMAN'S OFFICE.

(*T. Shanks, Chief Draughtsman.*)

The progress of our work during the past year was seriously retarded by changes in the personnel and organization of the staff owing to transfers, resignations and absence from various causes.

There is possibly no other branch in the service which has suffered more than ours in the last few years from transfers and resignations. During the past year fourteen clerks left the office and the strength of the technical portion of the staff is no greater now than at the time of the reorganization in 1908, although the work has greatly increased. The activity in general engineering work throughout the Dominion has made it difficult to secure or retain properly qualified men and the salaries offered in this branch of the service are not sufficiently attractive to offset the advantages of a less restricted career outside where there are brighter prospects for more rapid promotion, greater variety of work and higher remuneration. The reorganization of 1908 and the consequent transfer of many temporary employes to the permanent staff has undoubtedly helped to make the tenure of office more continuous than before, but conditions are not likely to be satisfactory until provision is made for better salaries for technical men and improved facilities for more rapid promotion.

Attention has been repeatedly called to the serious handicap to efficient organization and the prompt despatch of business owing to the fact that our staff cannot be accommodated in one building or in offices convenient to the other branches of the Department. The nature of our work necessitates frequent reference to the records of old surveys and as these are stored in a separate building the work is subject to awkward interruptions and delays. Moreover, it frequently happens that many of the record books and plans are retained in our offices for long periods, and with no adequate protection from fire. These valuable records comprise a complete history of Dominion land surveys, and as their loss would be irreparable provision should be made as soon as possible for their safe keeping.

The average number of surveyors employed in the field each year for the past ten years has been sixty-four, about equally divided between contractors and day men. The present tendency is towards an increase in the number of day men, and a corresponding falling off in contract work. One chief cause of this is the fact that as the country becomes settled the amount of work affecting old surveys increases. Errors come to light, monuments disappear, topographical features change, modifications of the old surveys are rendered necessary and the resurveys which result are too complicated to be done under contract. This change brings with it an increase in office work, as instructions to surveyors must be prepared in greater detail than for regular township subdivision, the examination of survey returns is more laborious and the preparation of the more involved plans requires greater skill in draughtsmanship than for the ordinary township plans, where much of the draughting and printing are done by mechanical means. The demand for original subdivision is still great, however, and it is estimated that about 180 townships will be surveyed under contract during 1912.

The primary object of our field work is to delimit the land for purposes of disposal and the plans of these surveys which are most urgently needed are those upon which entries may be granted and patents issued. But in addition to the work of marking out the boundaries of sections the surveyor collects much valuable information as to the character of the soil, the topography of the country, the extent of timber and prairie land and the natural resources of the district. An attempt has been made to compile this information in convenient form for reference but little progress has been made owing to the press of urgent routine work. Unless this information is up to date it loses much of its value and it is desirable that some arrangement shall be made to ensure early publication of data which, if one may judge from the inquiries received, are of great interest to the public.

FIRST SECTION—SURVEY INSTRUCTIONS AND GENERAL INFORMATION.

(H. G. Barber, Chief of Section.)

In this section instructions are prepared for surveyors engaged in field operations, and the returns of survey sent in by them are entered in the office registers. Preliminary plans are issued for all townships in which subdivision is done, except in the railway belt of British Columbia. This section also has charge of the preparation and issuing of the annual report of the Branch, and the answering of all requests for information from the general public or from other branches of the department.

During the year 161 drafts of instructions were issued involving the preparation of 1,905 sketches and 46 maps and tracings. These contained all necessary information regarding Dominion Lands, Indian reserves and other surveys already made in the vicinity, as well as all available information as to the nature of the country, roads, trails and methods of transportation.

Preliminary plans were issued for 285 townships. Four copies of each are prepared, one copy being placed on file in this office, and one each being furnished to the Survey Records Branch, the Lands Patents Branch and the land agent in whose district the township lies.

The number of files received from the Correspondence Branch for use in the work of the office was 1,800, and the total number of draft letters and memoranda written was 4,930.

The Manual of Instructions for the Survey of Dominion Lands was again revised. It is now almost ready for printing and will be issued in the course of the coming year.

During the year a report on the Peace River district was prepared and issued for the information of intending settlers. It gives a description of the soil, climate and main topographical features and of the various roads and trails leading into the country, with information about the stopping places, best means of transportation, etc. A map of the district accompanies the report.

Answering communications from settlers and others on various subjects and inquiries from other branches of the department forms an important part of the work. The number of communications dealt with during the year was 1,883, requiring the preparation of 3,599 sketches, 34 plans and tracings and 343 pages of field notes.

The office registers show that 1,142 progress sketches were received from the surveyors in the field, as well as 364 books of field notes for township surveys, 188 books and 330 plans for miscellaneous surveys, 235 timber reports, 86 statutory declarations of settlers and returns for 746 magnetic observations and for 29 timber berths. General reports on survey operations were received from thirty-eight surveyors.

Their examination being completed, 395 books of field notes of township surveys were placed on record together with 89 books and 137 plans of miscellaneous surveys and 86 statutory declarations of settlers.

Plans of 797 townships and 11 settlements or townsites were received from the lithographic office, entered in the registers and distributed, as well as 73 sectional maps and 106 miscellaneous plans.

The staff of this section consists of twenty-one permanent and three temporary employes, but of this number one is engaged the whole time in looking after the vault where numerous valuable records and sectional maps are kept, and the services of another employe are required to attend to requisitions for supplies for the whole Branch and the stationery for the office staff and the staff of the surveyors in the field.

SECOND SECTION—EXAMINATION OF RETURNS OF SURVEYS IN MANITOBA, SASKATCHEWAN, ALBERTA AND YUKON TERRITORY.

(T. S. Nash, Chief of Section.)

The work performed in the second section consists of the examination of the returns of survey of all Dominion lands other than those in the railway belt in British Columbia, and the preparation of the required plans thereof.

As soon as a surveyor completes the survey of a township, or a portion thereof, he forwards a sketch showing the progress of the work in the field. These sketches are examined to see that correct methods are being employed and that accurate results are being obtained. They also form the basis for advances to contractors on progress accounts.

During the year 335 progress sketches from contractors, 440 from men employed by the day and 196 from inspectors of contract surveys were examined, making a total of 971 sketches. Plans of 348 townships were compiled, 209 of which were first edition plans. The total number of township plans compiled is much smaller than in previous years, as the practice of compiling reprints of old surveys where the stock of township plans is exhausted, was discontinued.

An examination was made of 224 subdivision surveys and 186 miscellaneous surveys. Compiled plans of 16 miscellaneous surveys and 24 timber berths were made. Four hundred and nineteen memoranda on the examination of survey returns were sent to surveyors and 355 replies were received and the necessary corrections made. The number of draft letters prepared was 1,350. Twenty-six contract accounts were prepared and closed as the work was shown by the inspector's report to be satisfactorily performed.

In the report of last year it was stated that the question of issuing maps of the surveys in the Yukon Territory would be taken up this year. This has been done; a style of plan has finally been adopted and the first one, which covers the district in the immediate vicinity of Dawson, has been printed, while two others will be printed shortly. The new plan, which covers approximately sixteen miles in latitude and twenty miles in longitude is printed on a scale of one mile to the inch, and shows, in addition to surveys all available geographic information. A new filing cabinet for the Yukon work has been procured and a great number of plans have been thoroughly cross-indexed and filed for ready reference in compiling Yukon surveys. During the year 64 group lot surveys were examined. The remaining part of the Carmack's reference traverse and the returns of survey of the road from Yukon Crossing to Whitehorse were also received and examined.

Requests for information from other branches of the Department involved the writing of 220 memoranda, the preparation of 126 sketches and the calculation of 1,635 areas.

Two hundred and ninety-three plans of road diversions and 26 of timber berths were examined. The timber berths comprised 68 blocks and their boundaries totalled 569 miles, while the area is approximately 276 square miles. Twenty-four plans for these berths were prepared.

One hundred and eighty plans of right-of-way of railways were examined, the mileage of which is 3,114. As many of these plans were in duplicate and triplicate the gross mileage of plans examined was 5,892.

A large amount of work has been put upon the preparation of a topographical map of the valley of Fiddle creek, a tributary of Athabaska river in the Jasper Forest Park reserve, and in assisting the surveyor to complete his final returns of this survey.

The staff consists of twenty-six permanent and two temporary employes, but one of the permanent clerks is at present in charge of the office at Dawson, Yukon Territory.

THIRD SECTION—PREPARATION OF PLANS FOR REPRODUCTION.

(C. Engler, Chief of Section.)

The work of the third section consists in the preparation of copies of plans (which have been compiled in the second, fourth and sixth sections) for reproduction by photo-zincography or photo-lithography.

The appearance and accuracy of the printed copies of the various plans which are issued depend largely on the care given to the production of the fair or finished copies prepared in this section.

The efforts of both draughtsmen and stampers are directed to producing plans on which the information is shown accurately to scale, well arranged and of clean and neat appearance.

The various processes used in preparing fair copy plans have been described in previous reports.

The bulk of the work done in this section has necessarily been in connection with the issuing of township plans. Other plans prepared have been required for showing timber berths, orders in council, settlements or townsites, Yukon Territory group lots, Doukhobor villages and plans for the annual report.

Besides these, there are a number of plans and jobs forming a miscellaneous class in connection with the requirements of the branch, difficult to classify, but forming an important factor in work of the section.

A statement showing the classification and number of jobs undertaken and completed is given in the report of the Chief Draughtsman.

The staff numbers thirteen, three previous members having been transferred to other Departments or offices, and two appointments having been made.

In addition, the services of an assistant printer are constantly required and three temporary employes were appointed, one of whom has lately been transferred to another department.

FOURTH SECTION—SURVEYS IN THE RAILWAY BELT, BRITISH COLUMBIA.

(E. L. Rowan-Legg, Chief of Section.)

Instructions were prepared for surveys to be made in the railway belt and were accompanied by sketches and any other information which it was considered would be of assistance to the surveyors.

The greater part of the subdivision surveys which had to be shown on the township plans compiled during the year were those in which monuments were erected, as far as practicable, at legal subdivision corners and in the centre of legal subdivision boundaries along the surveyed lines, so that the lands might be disposed of in parcels of such sizes as may be desired.

On account, therefore, of the additional information required to be shown in connection with these surveys, quarter township plans were made on a scale of twenty chains to one inch. On these are shown the position and nature of all monuments, the distances between them, the bearings of the section or quarter section boundaries, the area of each legal subdivision or quarter section where monuments were placed at quarter section corners only, the section and legal subdivision numbers and provincial lots, Indian reserves, mineral claims, lakes, rivers, creeks and trails.

Field notes of the surveys of mineral claims, of miscellaneous surveys and of timber berths were examined. Plans of timber berths were made, and fair copies of them were forwarded to the Timber Branch.

A plan of the townsite of Field, in section 17, township 28, range 18, west of the fifth meridian, was compiled and printed, and also a second edition of the plan of the town of Lytton in section 6, township 15, range 26 and section 1, township 15, range 27, west of the sixth meridian.

In 1909, Mr. A. W. Johnson made a subdivision survey of villa lots at Woodhaven, in sections 23, 24 and 25, fractional township west of township 39, west of the coast meridian on Bedwell Bay, north arm of Burrard Inlet, a plan of which was compiled and printed.

This year a plan showing the block outlines of a proposed additional subdivision at Woodhaven was made for the guidance of the surveyor when the survey is being made.

The staff consists of seven permanent clerks, which is two fewer than the staff of the previous year.

FIFTH SECTION—MAPPING

(*J. Smith, Chief of Section.*)

The principal work of this section is the revision of sectional maps that have already been printed, and the completion of new sheets as they are required. Appendix No. 6 of this report shows the work done in this section during the year on sectional maps.

In addition to these maps, the following drawings were made:—A manuscript chart of the magnetic declination covering the southern part of Canada and the northern part of the United States, drawn on two sheets on a scale of one hundred miles to one inch to be photo-engraved on copper and printed on a scale of three hundred miles to one inch; a map of the Peace River district and one of the Peace River block on a scale of four miles to one inch; a map showing the topography along the fifteenth base line in the vicinity of the second meridian, drawn on a scale of four miles to one inch, to be photo-zincographed on a scale of six miles to one inch; a tracing of part of the Selkirk range on a scale of $\frac{1}{60,000}$, to be photo-lithographed on a scale of $\frac{1}{80,000}$.

Thirteen permanent employes constitute the staff of this section.

SIXTH SECTION—SCIENTIFIC AND TOPOGRAPHICAL WORK.

(*G. Blanchard Dodge, Chief of Section.*)

The work performed in general in this section consists of issuing instructions for and plotting returns of levels on meridians and base lines, checking and reducing magnetic observations, calculating astronomical field tables, testing and adjusting survey instruments, and preparing and issuing the pamphlets containing surveyors' township reports, &c.

The standard of accuracy of the levels on meridians and base lines was raised for 1911, and the difference of elevation between adjacent bench marks was required to be checked by a second independent line, the two lines to check between adjacent bench marks within 0·1 feet multiplied by the square root of the distance in miles.

All the level notes for 1910 have been checked, lists of bench marks prepared and profiles plotted. During the year 1,427 miles of level returns were received while 1,502 miles had been received previously. Level returns were examined and profiles plotted of 1,660 miles. All the lines on which levels have been run prior to March 31, 1912, are shown on a map which accompanies the report of the branch.

The number of magnetic declination returns received prior to March 31, 1911, was 2,841, of which 746 were received during the year. A statement of the results with a map showing the isogonic lines in that portion of western Canada covered by the Dominion Lands system of survey is published with the report of the branch in monograph form.

The office computations of triangulation surveys in the railway belt, British Columbia, have been brought up to date, but further information is necessary before much use can be made of the present results. It is hoped that the returns for next season's surveys will supply this information.

All the returns of azimuth observations for the year 1910, received during 1911, have been examined and checked, and also the latitude observations of Mr. J. A. Fletcher, D.L.S., taken during 1911. The astronomical field tables for the year have been computed.

Compiling surveyors' reports on the townships subdivided requires the services of four of the staff. A report on the townships covered by the Fort Pitt sectional sheet has been compiled and sent to the printers for publication.

Information was obtained for a map to accompany the report of 'Descriptions of surveyed townships in the Peace River district,' and a rough copy of the map was made with the information added.

SURVEYS LABORATORY.

A surveys laboratory for testing instruments has lately been built, and it has already proved very useful. Although only a portion of the equipment has been installed, facilities will be provided for testing and adjusting surveying transits, levels, aneroid barometers, measuring tapes, etc., and for rating chronometers and watches.

The number of letters received during the year was 446 while the number of letters sent was 1,130 besides 498 memoranda. Seventy-nine letters of instructions to surveyors were prepared.

The staff of the section consists of fourteen permanent clerks and two temporary clerks.

PHOTOGRAPHIC OFFICE.

(J. Woodruff, Chief Photographer.)

The offices of the Chief Photographer have been moved to the rooms in the basement formerly occupied by the lithographic office. The rooms have been fitted with the necessary appliances and afford every facility for the work.

There has not been much change in the amount of work executed. Velox and blue printing have increased but other lines have decreased.

The staff of four assistants is the same as last year.

PHOTOGRAPHIC OFFICE.

(H. K. Carruthers, Process Photographer.)

With the removal of the Chief Photographer's offices to the basement, it has been possible to give increased acccommodation to the process photographer.

The four dark rooms were made into two rooms, thus providing ample space for handling large zinc plates and glass negatives.

Sectional maps on the three miles scale which before required two 18-in. x 20-in. negatives are now made on one 24-in. x 32-in. plate and printed direct on zinc for the press.

Three township plans are printed at one operation on zinc 32-in. x 49-in. and sent direct to the lithographic office ready for the press.

A new automatic mercury vapour lamp was installed. Five tubes are used in connection with a pneumatic printing frame 36-in. x 60-in., an automatic electric pump maintaining the vacuum.

A full set of machines for line and half-tone engraving was set up in the basement of the Imperial Building. Twenty-one half-tone engravings were made to illustrate the Peace river report and almost a full set of line cuts for the Manual of Survey.

The staff was increased by the appointment of Mr. Leonard G. Smith as assistant process photographer, and now consists of four men. Mr. Smith has attended for six years the London County Council School of Photography, Engraving and Lithographing, and was six years on the staff of the Geographical Section of the War Office. He has proved a valuable addition to our staff.

In order to answer numerous enquiries concerning our copying camera, a description of the camera has been published in pamphlet form. It is annexed to this report as Appendix No. 11.

LITHOGRAPHIC OFFICE.

(A. Moody, Foreman.)

The lithographic office has been moved to the Imperial Building on Queen street where it occupies the whole of the basement. This place was probably the best available in town: it affords splendid accommodation and no better quarters could be had unless a building was erected for that special purpose.. The only disadvantage is that the place is a little damp in summer; it causes some trouble in registering coloured impressions.

A power paper-cutter was added to the equipment which now consists of a flat-bed power-press, a rotary offset power-press, three hand-presses for transferring, a zinc-plate graining machine and a power paper-cutter.

The work is for the greater part photo-zincographic printing. A few maps are printed on stones; others are engraved and transferred.

The staff of ten employes is the same as last year.

GEOGRAPHIC BOARD.

(A. H. Whitcher, Secretary.)

The Geographic Board has held a number of meetings and gave decisions on the geographic names submitted. The Chairman is Col. W. P. Anderson, Chief Engineer of Marine and Fisheries, and the report of the board is published by his Department.

The Secretary is a member of the staff of this office.

BOARD OF EXAMINERS FOR DOMINION LAND SURVEYORS.

(F. D. Henderson, Secretary.)

The Board of Examiners for Dominion Land Surveyors held a special meeting for the examination of candidates from April 29, 1911, to May 18, 1911, during which examinations were held at Ottawa, Toronto, Regina and Vancouver. An adjourned meeting for the preparation of examination papers was held from October 2 to October 12, 1911. The regular annual meeting began on February 12, 1912, and lasted until March 23, 1912. During this meeting examinations were held at Ottawa, Montreal, Kingston, Toronto, Winnipeg, Calgary and Edmonton.

The total number of candidates for examination during the year was 268, as against 257 in 1910-11, and 362 in 1909-10. Of these 186 tried the full preliminary, 9 the limited preliminary, 71 the final, and 2 the examination for Dominion Topographical Surveyor.

Fifty-seven candidates were successful at the preliminary examination as follows:—

PRELIMINARY EXAMINATION.

Atkins, Cecil Ben., Revelstoke, B.C.
Bedard, Edward L., Courtright, Ont.
Britton, George Clayton, Whitby, Ont.
Burland, George Lewis, Ottawa, Ont.
Burrell, Eric, Yarmouth North, N.S.
Byron, Malcolm Ross, Ottawa, Ont.
Cameron, Charles Scott, Regina, Sask.
Campbell, John James, Galt, Ont.
Carlile, Reginald Clifford, Calgary, Alta.
Carty, Edward Godfrey, Ottawa, Ont.
Cavell, Edward, Toronto, Ont.
Clarke, Roger Fyfe, Hamilton, Ont.
Clouston, Noel Stewart, Winnipeg, Man.
Coursier, Eric Clarence, Revelstoke, B.C.
de Noblens, Gerard, Aldersyde, Alta.
Duffield, Hugh J., Calgary, Alta.
Ells, Sidney C., Ottawa, Ont.
Falconer, Fairbairn S., Shelburne, Ont.
Finnie, Oswald Stirling, Ottawa, Ont.
Fournier, Ovide Edouard, Ottawa, Ont.
Fraser, Jonathan William, Ottawa, Ont.
Gardner, Charles Turville, Walhachin, B.C.
Gardner, James David, Ottawa, Ont.
Grange, Edward Rochfort, Toronto, Ont.
Hardouin, Joseph, Calgary, Alta.
Heinonen, Henry J., Toronto, Ont.
Jordan, Edward Elliot, Ottawa, Ont.
King, John Albert Shirley, Ottawa, Ont.
Le Blanc, Pierre Maxime Henri, Ottawa, Ont.
Lowrie, Arthur Wellington Percy, Russell, Ont.
Malcolm, William Noel, Winnipeg, Man.
Miller, Albert Sherman, Brighton, Ont.
Milliken, John Bolton, Ottawa, Ont.
Moran, Patrick Joseph, Kingston, Ont.
Murdie, William Campbell, Winthrop, Ont.
MacTavish, William Higgins, Van Camp, Ont.
McCaw, Donald Arthur, Welland, Ont.
McDonald, Roderick C., Ripley, Ont.
McFaul, W. Lawrence, Owen Sound, Ont.
Nesham, Lionel Charles, Ottawa, Ont.
Nicklin, Harold Raymond, Millbank, Ont.
Noecker, Claude, Waterloo, Ont.
Oke, William Verner, Toronto, Ont.
Platt, Errol Beauchamp, Toronto, Ont.
Rhys, Howard Leonard, Ottawa, Ont.
Robertson, John Donald, Edmonton, Alta.
Ross, Othmar Wallace, Brantford, Ont.
Somers, Newton Lloyd, Rockford, Ont.
Spence, William A., Ottawa, Ont.
Spero, John Ethelbert, Ottawa, Ont.
Stidwill, Frank, Cornwall, Ont.
Tye, Howard Warner, Stratford, Ont.
von Gunten, Carl Frederick, Blenheim, Ont.
Walker, George Stuart, Renfrew, Ont.
Watson, Angus Robert, Beaverton, Ont.
Wrong, Frederick Hay, Windsor, Ont.
Young, Stewart, Owen Sound, Ont.

Forty-eight candidates were successful at the final examination as follows:—

FINAL EXAMINATION.

Berry, Edward Wilson, Seaforth, Ont.
Boulton, William James, Wallaceburg, Ont.
Brown, Edgar Carl, Regina, Sask.
Burd, James Henry, Weyburn, Sask.
Cline, Carl Gordon, Toronto, Ont.
Cond, Fritz Thomas Piercy, Vancouver, B.C.
Cote, J. Aurele, Ottawa, Ont.
Dann, Eyre Morton, Kamloops, B.C.
Dennis, Thomas Clinton, Ottawa, Ont.
Earle, Wallace Sinclair, Victoria, B.C.
Fawcett, Sidney Dawson, Ottawa, Ont.
Fletcher, James Allan, Fletcher, Ont.
Fraser, Donald John, Ottawa, Ont.
Matheson, Hugh, Ottawa, Ont.
Melhuish, Paul, Vancouver, B.C.
Menzies, John Whyte, Ottawa, Ont.
MacKay, Ernest George, Hamilton, Ont.
MacLeod, George Waters, Edmonton, Alta.
McColl, Samuel Ebenezer, Winnipeg, Man.
McEwen, Duncan Findlay, Edmonton, Alta.
Narraway, Athos Maxwell, Ottawa, Ont.
Neelands, Rupert A., Hamiota, Man.
Neville, Everett A., Ruthven, Ont.
Palmer, Philip Ebenezer, Dorchester, N.B.
Peckover, Horace Joseph, Toronto, Ont.
Robinson, William Andrew, Winnipeg, Man.

Galletly, James Simpson, Brooklin, Ont.
Greene, Gerald Elliot Denbigh, Toronto, Ont.
Haggen, Rupert Williams, Revelstoke, B.C.
Hamilton, Charles Thomas, Vancouver, B.C.
Higgins, Connell J., Vancouver, B.C.
Hobbs, Wilfrid Ernest, Winnipeg, Man.
Hunter, A. Ernest, Wiarton, Ont.
Inkster, Oluff, Edmonton, Alta.
Jackson, John Edwin, Oxford Centre, Ont.
Jones, George Samuel, Ottawa, Ont.
Lindsay, James Herbert, Regina, Sask.
Loucks, Roy William Egbert, Saskatoon, Sask.
Roger, Alexander, Ottawa, Ont.
Stewart, Norman Charles, Nelson, B.C.
Stitt, Ormond Montgomery, Vancouver, B.C.
Stuart, Alexander Graham, Buckingham, Que.
Taggart, Charles Henry, Ottawa, Ont.
Tate, Harry William, Toronto, Ont.
Tipper, George Adrian, Brantford, Ont.
Tremblay, Albert Jacques, Edmonton, Alta.
Underwood, Joseph Edwin, Saskatoon, Sask.
Whyte, Harold Eustace, Victoria, B.C.
Wright, Alfred Esten, Prince Rupert, B.C.

As in former years, the time of the Board was largely taken up with the reading and valuation of the candidates' answers and with the preparation of sets of questions for the several examinations. The evidence as to the standing of final candidates, consisting of Provincial certificates in the case of Provincial Surveyors writing under section 21 of the Act, and of affidavits of service under articles in the case of others, had to be examined and passed upon.

The privilege of serving one year under articles instead of three years, as provided by Section 22 of the Act, was extended to graduates of the University of Liverpool holding the Degree of Bachelor of Engineering with Honours, and to graduates of the University of Dublin holding the Degree of B.A.I.

The forms of articles and of the transfer of articles (given in the Schedule of the Act as Forms B and D) are considered by the Board as unnecessarily long and involved. Considerable discussion took place with a view to preparing forms which would be shorter and easier to fill out.

When there are many candidates and when the examinations are held at places distant from Ottawa, it frequently happens that the results of the examinations are not known for a month or more after the candidates have finished writing. Thus the three weeks of grace allowed by the Rules of the Board is not enough to permit candidates who have passed the preliminary examination to come up for final examination one year or three years after as seems the intention of the Act. The Rules of the Board were, therefore, changed in this respect so as to allow any person who passes the preliminary examination and who becomes articled immediately on receiving notice thereof to write on the final examination in one year or in three years, as the case may be.

Oaths of office and allegiance and bonds for the sum of one thousand dollars each, as required by Section 25 of the Act, were received from and commissions as Dominion Land Surveyors were issued to, fifty-one surveyors.

Subsidiary standards of length as required by Section 35 of the Act, were tested and issued to thirty-seven surveyors. One standard which had changed hands was retested. A list of surveyors who have been furnished with standard measures up to March 31, 1912, will be found in Appendix No. 10.

The correspondence of the Board was as follows:—

Letters received.	1,824
Letters sent.	880
Circular letters, pamphlets, and parcels sent.	1,517

APPENDICES.

The following schedules and statements are appended:—

No. 1. Schedule of surveyors employed and work executed by them from April 1, 1911, to March 31, 1912.

No. 2. Schedule showing for each surveyor employed from April 1, 1911, to March 31, 1912, the number of miles surveyed of township section lines, township outlines, traverses of lakes and rivers and resurvey; also the cost of the same.

No. 3. List of lots in the Yukon Territory, surveys of which have been received from April 1, 1911, to March 31, 1912.

No. 4. List of miscellaneous surveys in the Yukon Territory, returns of which have been received from April 1, 1911, to March 31, 1912.

No. 5. Statement of work executed in the office of the chief draughtsman.

No. 6. List of new editions of sectional maps issued from April 1, 1911, to March 31, 1912.

No. 7. Statement of work executed in the photographic office from April 1, 1911, to March 31, 1912.

No. 8. Statement of work executed in the lithographic office from April 1, 1911, to March 31, 1912.

No. 9. List of Employes of the Topographical Surveys Branch at Ottawa, giving the name, classification, duties of office and salary of each.

No. 10. List of Dominion Land Surveyors who have been supplied with standard measures.

No. 11. The copying camera.

No. 12. Results of observations for magnetic declination.

Nos. 13 to 51. Reports of surveyors employed.

Note.—Appendices Nos. 11 to 51 appear in the report of the Topographical Surveys Branch in monograph form.

MAPS AND PROFILES.

The following maps and profiles accompany the report of the Topographical Surveys Branch in monograph form:—

Map showing surveys to March 31, 1912.
Map of Mt. Robson and vicinity.
Maps to accompany reports of surveyors.
Profiles of meridians and base lines.

I have the honour to be, sir,
Your obedient servant,

E. DEVILLE,
Surveyor General.

TOPOGRAPHICAL SURVEYS BRANCH

SCHEDULES AND STATEMENTS

APPENDIX No. 1.

SCHEDULE of Surveyors employed and work executed by them from April 1, 1911, to March 31, 1912.

Surveyor.	Address.	Description of Work.
Akins, J. R.	Ottawa, Ont.	Survey of the north boundary of the Peace River block, production of the twenty-third base line across ranges 10, 11 and 12, and parts of ranges 9 and 13; survey of the east outlines of townships 85, 86, 87 and 88, range 13, west of the sixth meridian.
Allison, C. B.	South Woodslee, Ont.	Contract No. 4 of 1911. Subdivision of townships 36 and 37, range 20, townships 34, 35 and 36, range 21, the southerly two-thirds of township 38, range 20, and the northerly third of township 33, range 21, west of the principal meridian.
Ashton, A. W.	Ottawa, Ont.	Survey of Blairmore cemetery in township 8, range 4, west of the fifth meridian. Miscellaneous surveys in townships 20 and 21, range 24, and at Lytton in township 15, range 27, west of the sixth meridian.
Aylen, J.	North Bay, Ont.	Contract No. 7 of 1911. Subdivision of township 46 and the north third of township 45, range 9, townships 46, 47; the north third of township 45 and the south two-thirds of township 48, range 10; survey of the north and south outlines of township 47, range 9, west of the second meridian.
Aylsworth, C. F.	Madoc, Ont.	Retracement in townships 13, 14 and 15, range 6, east of the principal meridian; survey of lots in Turtle Mountain and Moose Mountain forest reserves.
Baker, J. C.	Kingston, Ont.	Contract No. 15 of 1911. Subdivision of townships 56, 57, 58, 59 and 60, range 17, and township 57, range 18, west of the third meridian.
Belanger, P. R. A.	Ottawa, Ont.	Inspection of contracts Nos 2 and 3 of 1910. Contracts Nos. 3, 8 and part of contract No. 5 of 1911. Settlement survey at Fisher Bay in township 29, range 2, east of the principal meridian. Subdivision of parts of township 16, range 16, and townships 15 and 16, range 17, east of the principal meridian. Resurvey in township 33, range 8, and townships 31 and 32, range 9, west of the principal meridian.
Bennett, G. A.	Eden, Ont.	Subdivision in townships 13 and 14, range 29, west of the second meridian. Retracement in townships 9 and 10, ranges 10 and 11, townships 7 and 8, range 15, township 8, range 16, township 20, range 17, and townships 10 and 11, range 19, west of the second

APPENDIX No. 1—*Continued.*

SCHEDULE of Surveyors employed and work executed by them from April 1, 1911, to March 31, 1912—*Continued.*

Surveyor.	Address.	Description of Work.
		meridian; township 13, range 4, township 25, range 6, townships 13 and 16, range 14, township 19, range 15, and township 26, range 20, west of the third meridian; township 21, range 1, townships 10 and 11, range 5, townships 10, ranges 6 and 10, and township 8, range 21, west of the fourth meridian. Resurvey in township 16, range 13, townships 27 and 28, ranges 14 and 15, township 26, range 23, and township 33, range 26, west of the third meridian; townships 16, ranges 3 and 4, townships 14 and 15, range 10, township 19, range 21, and township 18, range 26, west of the fourth meridian. Investigation in township 15, range 3, and townships 11 and 15, range 4, west of the fourth meridian. Traverse in township 25, range 5, west of the third meridian; townships 14, ranges 21 and 22, and townships 36, ranges 24 and 25, west of the fourth meridian.
Blanchet, G. H.. ..	.Ottawa, Ont..	Survey of the twenty-third base line between the fourth and fifth meridians.
Brenot, L..	..Ottawa, Ont..	Survey of the western boundary of the Peace River block from the twenty-first base line to the north-west corner of the block.
Bridgland, M. P...	..Calgary, Alta..	Triangulation survey in the railway belt, British Columbia. Survey of villa lots at Banff. Investigation in township 27, range 1, and township 24, range 8, west of the fifth meridian.
Carson, P. A..	..Ottawa, Ont..	Stadia traverse of North Lillooet river in township 12, east of the coast meridian.
Cautley, R. H.. ..	..Edmonton, Alta..	Contract No. 23 of 1911. Subdivision of township 49, range 12, townships 49, 50 and 51, range 13, and townships 50 and 51, range 14, west of the fifth meridian.
Chase, A. V...	..Orillia, Ont..	Examination of lands in the Kamloops distract of the railway belt, British Columbia, for the purpose of classification into fruit land, farming land, grazing land, timber land and worthless land. Subdivision in township 14, range 23, township 15, range 26, and townships 14 and 15, range 27, west of the sixth meridian. Traverse in township 15, range 26, and townships 13, 14 and 15, range 27, west of the sixth meridian.
Christie, Wm.... ..	..Prince Albert, Sask. .	Contract No. 11 of 1911. Subdivision of townships 53, 54 and 55, range 8, townships 51, 52 and 53, range 9, and survey of the east outline of township 56, range 9, west of the third meridian.
Cote, J. L..	..Edmonton, Alta..	Contract No. 21 of 1911. Subdivision of townships 45, 46 and 47, range 7, township 48, range 8, and townships 48 and 49, range 9, west of the fifth meridian. Contour survey of the townsite of Fitzhugh, in township 45, range 1, west of the sixth meridian.
Cumming, A. L..	..Cornwall, Ont..	Retracement surveys in townships 7, ranges 23 and 24, west of the third meridian; township 44, range 4, township 48, range 10, townships 48 and 49, range 11, townships 50, ranges 13 and 14, and townships 44 and 45,

APPENDIX No. 1—*Continued.*

SCHEDULE of Surveyors employed and work executed by them from April 1, 1911, to March 31, 1912—*Continued.*

Surveyor.	Address.	Description of Work.
		range 15, west of the fourth meridian. Subdivision of parts of township 19, range 7, and township 20, range 8; survey of part of the east outline of township 20, range 7, west of the fifth meridian. Traverse in townships 44 and 45, range 15, west of the fourth meridian, and townships 19 and 20, range 7, west of the fifth meridian.
Davies, T. A.	Edmonton, Alta.	Contract No. 19 of 1911. Subdivision of townships 67, 68 and the north third of 66, ranges 10, 11 and 12, west of the fourth meridian. Retracement of lots in Lac la Biche settlement in township 67, range 12, west of the fourth meridian.
Day, H. S.	St. John, N.B.	Settlement surveys at Pelican, Grand Rapids, McMurray, McKay and Chipewyan, on Athabaska river. Traverse of part of Athabaska river near McKay.
Deans, W. J.	Brandon, Man.	Subdivision in township 8, range 26, and townships 2, 3 and 4, range 29, west of the sixth meridian; townships 2 and 38, west of the coast meridian; and townships 14, 17, 18, 19, 20, 22 and 25, east of the coast meridian. Resurvey in townships 2 and 3, range 29, west of the sixth meridian; townships 2 and 38, west of the coast meridian; and townships 17, 18, 19, 20, 22 and 23, east of the coast meridian. Traverse in township 8, range 26, and township 2, range 29, west of the sixth meridian, and townships 20, 22 and 25, east of the coast meridian. Survey of timber berth No. 544, in township 2, west of the coast meridian and berth No. 553, in townships 17 and 18, east of the coast meridian.
Fairchild, C. C.	Brantford, Ont.	Contract No. 27 of 1911. Subdivision of townships 57, ranges 14, 15, 16 and 17, and township 56, range 18, west of the fifth meridian.
Fletcher, J. A.	Ottawa, Ont.	Latitude observations along the principal meridian in townships 35 and 48, and along the fourth meridian in townships 62 and 89.
Fontaine, L. E.	Levis, Que.	Inspection of contracts Nos. 15, 29, 30 and 31 of 1910, and contracts Nos. 21, 22, 23, 24, 27 and parts of Nos. 20 and 28 of 1911. Reinspection of contracts Nos. 22 and 23 of 1909. Correction survey in township 47, range 5, and townships 48 and 49, range 6, west of the fifth meridian. Survey of part of timber berth No. 1727, in townships 48 and 49, range 6, west of the fifth meridian.
Francis, J.	Portage la Prairie, M.	Subdivision of parts of townships 43 and 44, range 20, townships 45 and 46, range 23, and township 46, range 24, west of the fifth meridian.
Gibbon, Jas.	Vancouver, B.C.	Contract No. 2 of 1911. Subdivision of townships 28 and 29, ranges 7 and 8, and township 29, range 9, west of the principal meridian.
Green, T. D.	Ottawa, Ont.	Contract No. 20 of 1911. Subdivision of townships 41, 42, 43 and 44, range 7, township 41, range 8, and township 39, range 9, west of the fifth meridian.

APPENDIX No. 1—*Continued.*

SCHEDULE of Surveyors employed and work executed by them from April 1, 1911, to March 31, 1912—*Continued.*

Surveyor.	Address.	Description of Work.
		Survey of timber berth No. 1788 in townships 40 and 41, range 9, west of the fifth meridian.
Hawkins, A. H	Listowel, Ont	Survey of the twenty-second base line across ranges 1 to 20, west of the fifth meridian.
Heathcott, R. V	Edmonton, Alta	Contract No. 26 of 1911. Subdivision of townships 49 and 50, range 20, and township 50, range 21, part of township 49, range 21, and the south thirds of townships 51, ranges 19, 20 and 21, west of the fifth meridian.
Herriot, G. H	Ottawa, Ont	Subdivision in township 48, range 26, and townships 48 and 49, range 27, west of the fifth meridian. Correction surveys in townships 51 and 52, range 24, west of the fifth meridian. Contour survey of the land adjoining the Fiddle Creek hot springs in Jasper Forest Park reserve in Western Alberta.
Holcroft, H. S	Toronto, Ont	Contract No. 29 of 1911. Subdivision of township 73, range 16, townships 73, 76 and portions of 74 and 75, range 17, townships 74, 75 and 76, range 18 and part of township 76, range 19, and survey of the east outline of township 73, range 19, west of the fifth meridian.
Hubbell, E. W	Ottawa, Ont	Inspection of contracts Nos. 9, 10, 12, 13, 15 and 16 of 1911; partial inspection of contracts No. 6 of 1910 and No. 11 of 1911. Part subdivision of township 52, range 16, west of the third meridian. Resurvey in townships 45, ranges 27 and 28, west of the second meridian, and townships 45 and 46, range 5, west of the third meridian. Traverse in township 52, range 17, west of the third meridian.
Inkster, O	Edmonton, Alta	Contract No. 28 of 1911. Subdivision of townships 56, ranges 19, 20 and 21, townships 55, 56 and the north third of 54, range 22, and the south two-thirds of township 54, range 23, west of the fifth meridian.
Kimpe, M	Edmonton, Alta	Contract No. 22 of 1911. Subdivision of townships 48 and 49, range 10, townships 48, 49, 50 and 51, range 11, and townships 48, 50 and 51, range 12, west of the fifth meridian. Survey of timber berth No. 1749 in townships 42 and 43, ranges 13 and 14, west of the fifth meridian.
Laurie, R. C	Battleford, Sask	Contract No. 13 of 1911. Subdivision of townships 50, 51 and 52, range 11, and townships 52, ranges 12 and 13, west of the third meridian.
Lighthall, A	Vancouver, B.C	Subdivision in township 7, range 29, west of the sixth meridian; township 6, range 4, and townships 4, 5, 6 and 7, range 5, west of the seventh meridian; townships 40 and 41, east of the coast meridian. Resurvey in township 7, range 29, west of the sixth meridian; townships 4 and 6, range 5, west of the seventh meridian; townships 15, 40 and 41, east of the coast meridian. Traverse in township 7, range 29, west of the sixth meridian, township 6, range 4, and townships 4, 5 and 6, range 5, west of the seventh meridian; townships 15, 40 and 41, east of the coast meridian.

APPENDIX No. 1—*Continued.*

SCHEDULE of Surveyors employed and work executed by them from April 1, 1911, to March 31, 1912—*Continued.*

Surveyor.	Address.	Description of Work.
		Levelling along the street lines at Woodhaven on Bedwell Bay, British Columbia. Survey of timber berth No. 547 in township 7, range 29, west of the sixth meridian; timber berths Nos. 546, 548 and 549, in township 6, ranges 4 and 5, west of the seventh meridian.
Lonergan, G. J..	Buckingham, Que.. ..	Inspection of contracts Nos. 27, 28, 32 and 33 of 1910, and contracts Nos. 29, 30, 31 and 32 of 1911. Miscellaneous resurveys in townships 50, 51 and 53, range 27, and townships 50, 51, 53 and 54, range 28, west of the fourth meridian. Correction survey at St. Albert settlement.
McFarlane, J. B... ..	Toronto, Ont..	Production of the fourth meridian from the north-east corner of section 13, township 95 to the north-east corner of township 105. Survey of the twenty-fourth base line across ranges 1, 2, 3 and 4, west of the fourth meridian.
McFarlane, W. G... ..	Toronto, Ont..	Contract No. 32 of 1911. Subdivision of townships 77, 78, 79 and 80, ranges 13, 14 and 15, west of the sixth meridian.
McGrandle, H...	Wetaskiwin, Alta... ..	Contract No. 25 of 1911. Subdivision of township 51, range 17 and townships 49, 50 and the south third of 51, range 18, west of the fifth meridian.
MacLennan, A. L.. ...	Toronto, Ont..	Subdivision of townships 56, ranges 25 and 26 and part subdivision of township 57, range 26 and township 56, range 27, west of the principal meridian. Mounding along the fifteenth base line in ranges 25 and 26, west of the principal meridian. Traverse in townships 56, ranges 24, 25 and 26, west of the principal meridian. Survey of booming site on Carrot river, in townships 56, ranges 26 and 27, west of the principal meridian.
McMillan, Geo..	Ottawa, Ont..	Production of the twenty-first base line across ranges 13 to 26, west of the sixth meridian. Survey of the west boundary of the Peace river block from the twenty-first base line to the south-west corner of the block.
McNaughton, A. L.. ..	Cornwall, Ont..	Part subdivision of townships 46, ranges 18 and 19, townships 47 and 48, range 20, and township 48, range 21, west of the fifth meridian Survey of the east outline of township 45, range 20, west of the fifth meridian.
Martindale, E. S.. ...	Kingsmill, Ont..	Part subdivision of township 17, ranges 4 and 5, townships 17 and 18, range 6, and townships 18 and 19, range 7, west of the fifth meridian. Resurvey in township 23, range 33, west of the principal meridian. Correction survey in township 52, range 4, and townships 36 and 37, range 12, west of the third meridian. Retracement survey in townships 7, ranges 3, 4 and 5, west of the fifth meridian. Traverse of South Saskatchewan river across township 48, range 24A, west of the second meridian.
Matheson, H..	Ottawa, Ont..	Correction survey in townships 52 and 53 range 21, townships 51, 52 and 53, range 22 and townships 52 and 53, range 23, west of the fifth meridian.

APPENDIX No. 1—*Continued.*

SCHEDULE of Surveyors employed and work executed by them from April 1, 1911, to March 31, 1912—*Continued.*

Surveyor.	Address.	Description of Work.
Miles, C. F.	Toronto, Ont.	Inspection of contracts Nos. 14, 20 and 22 of 1910. Contracts Nos. 17, 18 and 19 of 1911, and part of contract No. 10 of 1910. Reinspection of contract No. 26 of 1909. Subdivision in townships 61 and 62, range 3, west of the fourth meridian. Retracement in townships 15, 16 and 17, range 27, west of the second meridian and in township 14, range 26, west of the third meridian.
Moberly, H. K.	Moosomin, Sask.	Survey of timber berths Nos. 1681 and 1682 in township 44, range 9, townships 44 and 45, range 10, and township 45, range 11, west of the second meridian.
Montgomery, R. H.	Prince Albert, Sask.	Contract No. 10 of 1911. Subdivision of townships 53, 54 and 55, range 6, townships 54 and 55, range 7 and survey of the east outlines of townships 56, ranges 6, 7 and part of 8, west of the third meridian. Survey of timber berth No. 1686 in townships 51, ranges 4 and 5, west of the third meridian.
Morrier, J. E.	Ottawa, Ont.	Contract No. 9 of 1911. Subdivision of townships 53 and the south two-thirds of 54, ranges 25 and 26, townships 53, ranges 27 and 28, west of the second meridian, and the east half of township 53, range 1, west of the third meridian. Survey of timber berth No. 1785 in townships 44, 45 and 46, range 11, townships 44 and 45, range 12, and township 44, range 13, west of the second meridian.
Nash, T. S.	Ottawa, Ont.	Investigation survey in township 2, range 21, west of the principal meridian.
Pequegnat, M.	Berlin, Ont.	Contract No. 3 of 1911. Subdivision of township 33, range 8, and townships 32 and 33, ranges 9 and 10, west of the principal meridian.
Plunkett, T. H.	Meaford, Ont.	Correction survey and mounding along the fifth meridian through townships 93 to 110, inclusive, and portions of townships 81, 92, 111 and 112; the twenty-eighth base line across ranges 1, 2 and part of 3, and the twenty-ninth base line across part of range 1, west of the fifth meridian.
Ponton, A. W.	Edmonton, Alta.	Production of the principal meridian from the thirteenth to the sixteenth base line.
Powell, W. H.	Ottawa, Ont.	Contract No. 14 of 1911. Subdivision of townships 61, ranges 12, 14 and 15, and the south two-thirds of townships 62, ranges 12, 13, 14 and 15, west of the third meridian.
Purser, R. C.	Windsor, Ont.	Subdivision in township 52, range 20, west of the fourth meridian. Miscellaneous resurveys in township 6, range 9, townships 5 and 25, range 29 and township 8, range 31, west of the principal meridian; township 5, range 7 and township 33, range 21, west of the second meridian; township 36, range 2, township 34, range 3, and township 36, range 6, west of the third meridian; township 43, range 1, township 45, range 2, township 43, range 4, township 44, range 5, township 41, range 9, and township 49, range 20, west of the fourth meridian. Traverse in township 38, range 19, west of the second meridian, and township 43, range 2, west of the third meridian.

APPENDIX No. 1—*Continued.*

SCHEDULE of Surveyors employed and work executed by them from April 1, 1911, to March 31, 1912—*Continued.*

Surveyor.	Address.	Description of Work.
Ransom, J. T..	Toronto, Ont..	Contract No. 5 of 1911. Subdivision of township 39, range 4, township 39 and the south two-thirds of township 40, range 5, and townships 39 and 40, ranges 6 and 7, west of the second meridian.
Rinfret, C..	Montreal, Que..	Retracement surveys in township 17, range 16. townships 17, ranges 17 and 19, township 17, range 18, townships 16, ranges 21 and 22. townships 15 and 16, range 23, townships 14, 15 and 16, range 24, townships 17 and 18, range 25, townships 15, 16, 17 and 18, range 26, and township 18, range 27, west of the second meridian. Resurvey in township 25, range 29, township 29, range 31, and townships 32, ranges 32 and 33, west of the principal meridian; township 30, range 14, and township 16, range 25, west of the second meridian, township 23, range 6, township 22, range 9, and townships 14 and 15, range 28, west of the third meridian; township 26, range 16, west of the fourth meridian. Traverse in township 32. range 1, west of the second meridian, and township 28, range 15, west of the fourth meridian.
Robinson, E. W..	Ottawa, Ont..	Survey of the second meridian from the north-east corner of township 61, to the north-east corner of section 1, township 68. Production of the fifteenth base line across ranges 1 to 21, west of the second meridian.
Rolfson, O..	Walkerville, Ont.. ..	Production of the twenty-second base line across ranges 13 to 26, west of the sixth meridian; survey of the east outlines of townships 83 and 84, and retracement of part of the east outline of township 82, range 13, west of the sixth meridian.
Ross, J. E..	Kamloops, B.C..	Subdivision in townships 16, 17 and 18, range 14, and townships 16 and 19, range 15, west of the sixth meridian.
Roy, J. E..	Quebec, Que..	Contract No. 12 of 1911. Subdivision of townships 49 and 50, range 9 and townships 50, 51 and 52, range 10, west of the third meridian.
Saint Cyr, A..	Ottawa, Ont..	Survey of the seventeenth base line across ranges 13 to 26, and subdivision surveys in townships 65, ranges 26 and 27, west of the third meridian. Reposting along fourth meridian through townships 61, 62 and 63.
Scott, W. A..	Galt, Ont..	Subdivision in townships 32 and 33, range 10 and township 32, range 11, west of the third meridian; townships 9, 10, 12 and 13, range 4, and survey of the east outline of township 11, range 5, west of the fifth meridian. Correction survey in township 26, range 15, west of the third meridian. Retracement in townships 7 and 8, range 6, township 8, range 7, townships 45 and 46, range 16, township 45. range 17, and township 60, range 25, west of the fourth meridian. Traverse in township 41, range 13, west of the fourth meridian.
Smith, J. H..	Edmonton, Alta..	Contract No. 31 of 1911. Subdivision of township 83 and part of township 82, range 24, townships 82 and 83 and survey of the east

APPENDIX No. 1—*Continued.*

SCHEDULE of Surveyors employed and work executed by them from April 1, 1911, to March 31, 1912—*Continued.*

Surveyor.	Address.	Description of Work.
		outlines of townships 84, ranges 25 and 26, west of the fifth meridian; township 79, range 3, townships 75, 76, 78, 79 and the north third of township 74, range 4, and townships 75, 76 and the north third of 74, range 5, west of the sixth meridian.
Steele, I. J.	Ottawa, Ont.	Contract No. 31 of 1911. Subdivision of townships 61 and the south two-thirds of township 62, ranges 24, 25, 26 and 27, west of the third meridian.
Stewart, L. D. N.	Saskatoon, Sask.	Contract No. 8 of 1911. Subdivision of townships 49, 50, 51, 52 and 53, range 11, west of the second meridian.
Stewart, W. M.	Saskatoon, Sask.	Contract No. 16 of 1911. Subdivision of townships 58, 59 and 60, ranges 18 and 19, and survey of the east outline of township 57, range 18, west of the third meridian.
Stock, J. J.	Ottawa, Ont.	Contract No. 30 of 1911. Subdivision of townships 77, 78, 79 and 80, range 17, township 80, range 18, and portions of townships 75, 76 and 77, range 16, west of the fifth meridian.
Street, P. B.	Toronto, Ont.	Subdivision in township 5, range 4, and townships 5 and 8, range 5, west of the fifth meridian. Retracement in townships 21, ranges 4 and 5, and township 23, range 6, west of the principal meridian; townships 2, ranges 11 and 12, townships 1 and 2, range 13, townships 2, ranges 14 and 15, and townships 7, ranges 29 and 30, west of the fourth meridian Correction survey in township 9, range 21, west of the second meridian. Traverse in township 23, range 3, east of the principal meridian and township 4, range 1, west of the fifth meridian.
Taggart, C. H.	Ottawa, Ont.	Subdivision in townships 23 and 24, range 18, and townships 24 and 25, ranges 19 and 20, west of the fifth meridian; township 23, range 1, townships 22 and 23, range 2, townships 17, ranges 12 and 13, townships 17 and 18, range 14, townships 16, 17 and 18, ranges 15 and 16, township 16, range 17, and townships 17, ranges 18 and 19, west of the sixth meridian. Resurvey in townships 21, 22 and 23, range 1, townships 22 and 23, range 2, and township 16, range 17, west of the sixth meridian. Traverse in township 23, range 18 and township 21, range 29, west of the fifth meridian; townships 21 and 22, range 1, townships 22 and 23, range 2, township 20, range 6, township 22, range 17 and township 17, ranges 18 and 19, west of the sixth meridian. Survey of timber berth No. 545 in township 23, range 18, west of the fifth meridian and timber berth No. 550 in township 20, range 6, west of the sixth meridian.
Teasdale, C. M.	Concord, Ont.	Part of contract No. 3 of 1910. Subdivision of township 39, range 10, west of the second meridian.
Thompson, W. T.	Grenfell, Sask.	Survey of timber berths Nos. 1666, 1667, 1668, 1669, 1670 and 1671 near Sipanok channel in eastern Saskatchewan, and timber berth No. 1790 in township 38, range 28, west of the principal meridian.

APPENDIX No. 1—*Concluded.*

SCHEDULE of Surveyors employed and work executed by them from April 1, 1911, to March 31, 1912—*Concluded.*

Surveyor.	Address.	Description of Work.
Waddell, W. H..	Edmonton, Alta..	Contract No. 17 of 1911. Subdivision of townships 58, 59 and 60, range 22, townships 59 and 60, range 23, and township 60, range 24, west of the third meridian. Contract No. 33 of 1911. Subdivision of townships 58, 59 and 60, ranges 20 and 21, west of the third meridian.
Waldron, J..	Moosejaw, Sask..	Contract No. 6 of 1911. Subdivision of township 40 and the north third of township 39, range 8, townships 38 and 40, and the west halves of townships 39 and 41, range 9, the east third of township 41, range 10, the west half of township 41, range 11 and township 41, range 12, west of the second meridian.
Walker, C. M..	Guelph, Ont..	Retracement in townships 13 and 14, range 7, west of the principal meridian. Subdivision in townships 21, 22 and 23, range 6, west of the fifth meridian. Mounding in township 24, range 6, west of the fifth meridian.
Wallace, J. N..	Calgary, Alta..	Levelling northerly from Prince Albert and Lloydminster along the third and the fourth meridians.
Young, W. H....	Lethbridge, Alta..	Contract No. 24 of 1911. Subdivision of township 49, range 14, townships 49, 50 and 51, range 15, and township 51, range 16, west of the fifth meredian.

APPENDIX No. 2.

SCHEDULE showing for each surveyor employed from April 1, 1911, to March 31, 1912, the number of miles surveyed of township section lines, township outlines, traverses of lakes and rivers and resurvey, also the cost of the same.

Surveyor.	Miles of section lines.	Miles of outlines.	Miles of traverse.	Miles of resurvey.	Total mileage.	Total cost.	Cost per mile.	By day work or by contract.
						$	$ cts.	
Akins, J. R	83	49		2	134	27,800	207 46	Day.
Allison, C. B.	281	20	131		432	9,997	23 14	Contract.
Aylen, J	216	18	18	5	257	7,582	29 50	"
Aylsworth, C. F.			25	54	79	9,554	120 94	Day.
Baker, J. C.	277	36	14		327	9,556	29 22	Contract.
Bennett, G. A	4		35	168	207	5,232	25 28	Day.
Blanchet, G. H		150			150	26,340	175 60	"
Brenot, L	39	31			70	17,431	249 01	"
Cautley, R. H	296	36	23		355	10,539	29 69	Contract.
Christie, Wm.	280	33	145		458	11,225	24 51	"
Côté, J. L.	282	24			306	9,119	29 80	"
Cumming, A. L.	44		37	144	225	12,193	54 19	Day.
Davies, T. A.	334	42	110		486	12,483	25 69	Contract.
Day, H. S.			93		93	7,875	84 68	Day.
Deans, W. J.	29		29	23	81	8,525	105 25	"
Fairchild, C. C.	234	24			258	8,722	33 81	Contract.
Francis, J	115	5	8	12	140	10,907	77 91	Day.
Gibbon, Jas	200		39	36	275	7,117	25 88	Contract.
Green, T. D.	282	30	31	8	351	9,227	26 29	"
Hawkins, A. H		120			120	18,938	157 82	Day.
Heathcott, R. V	231	40	111		382	9,330	24 42	Contract.
Herriot, G. H	27	3	13	18	61	8,181	134 11	Day.
Holcroft, H. S	347	42	22		411	12,197	29 68	Contract.
Inkster, O.	264	24	41		329	9,178	27 90	"
Kimpe, M.	426	42	60		528	14,881	28 18	"
Laurie, R. C.	199	12	54		265	6,692	25 25	"
Lighthall, A.	20		9	31	60	8,939	148 98	Day.
MacLennan, A. L.	103	11	70	26	210	6,525	31 07	"
Martindale, E. S.	57	12	6	134	209	10,753	51 45	"
Matheson, H.			43	109	152	3,579	23 55	"
McFarlane, J. B.		88			88	22,717	258 15	"
McFarlane, W. G.	586	96	70		752	19,395	25 79	Contract.
McGrandle, H.	150	28			178	5,566	31 27	"
McMillan, Geo.	25	44		4	73	19,653	269 2	Day.
McNaughton, A. L.	86	18	7		111	10,564	95 1	"
Montgomery, R. H.	261	60	206	6	533	12,310	23 1	Contract.
Morrier, J. E.	236	36	80		352	9,304	26 4	"
Pequegnat, M.	210	21	15	10	256	7,030	27 4	"
Plunkett, T. H.				130	130	17,661	135 8	Day.
Ponton, A. W		72			72	14,233	197 6	"
Powell, W. H.	278	50	164		492	12,063	24 52	Contract.
Purser, R. C	10		47	80	137	4,940	36 06	Day.
Ransom, J. T.	335		18	6	359	10,685	29 76	Contract.
Rinfret, C.			16	787	803	10,840	13 50	Day.
Robinson, E. W.		163			163	16,753	102 78	"
Rolfson, O.		90		2	92	26,944	292 87	"
Roy, J. E.	240	12	214		466	10,045	21 56	Contract.
Saint-Cyr, A	9	82		15	106	13,879	130 93	Day.
Scott, W. A	30	24	8	168	230	9,467	41 16	"
Smith, J. H.	555	79	58	2	694	18,967	27 33	Contract.
Steele, I. J	300	40	126		466	11,921	25 58	"
Stewart, L. D. N.	240	36	27		303	8,866	29 26	"
Stewart, W. M.	295	48	37		380	10,934	28 77	"
Stock, J. J.	324	54	18		396	11,492	29 02	"
Street, P. B.	10	4	5	288	307	8,746	28 49	Day.
Taggart, C. H.	57		38	20	115	10,426	90 66	"
Teasdale, C. M.	48		12		60	1,580	26 33	Contract.
Waddell, W. H.	566	36	225		827	19,554	23 64	"
Waldron, J.	290			1	291	8,570	29 45	"
Walker, C. M	75	26	9	22	132	11,348	85 97	Day.
Young, W. H	212	30	10	6	258	8,177	31 69	Contract.
Total.	10,098	2,041	2,577	2,317	17,033	715,247		

APPENDIX No 3.

LIST of lots in the Yukon Territory, survey returns of which have been received from April 1, 1911, to March 31, 1912.

GROUP No. 2.

Lot No.	Acres.	Surveyor.	Year of Survey.	Date of Approval.	Claimant.	Remarks.
228	10·00	F. H. Kitto	1911	Apr. 12, 1912	Granville Power Co	Surface.
295	1·60	〃	1911	Mar. 21, 1912	Chas. Fisher	Surface.
298	160·00	〃	1911	Mar. 21, 1912	Chas. Fisher	Surface.
321	51·65	〃	1911	Apr. 12, 1912	Granville Power Co	"Huskey" Min. Cl.
322	51·65	〃	1911	Apr. 12, 1912	Granville Power Co	"Whiteside" 〃
323	51·65	〃	1911	Apr. 12, 1912	Granville Power Co	"Boyle" 〃
324	51·65	〃	1911	Apr. 12, 1912	Granville Power Co	"Kitto" 〃
325	51·65	〃	1911	Apr. 12, 1912	Granville Power Co	"Alexander" 〃
326	51·65	〃	1911	Apr. 12, 1912	Granville Power Co	"Granville" 〃
333	51·65	〃	1911	Apr. 12, 1912	Granville Power Co	"Morgan" 〃
334	51·65	〃	1911	Apr. 12, 1912	Granville Power Co	"Maggie" 〃
335	51·65	〃	1911	Apr. 12, 1912	Granville Power Co	"North Fork" 〃
336	51·65	〃	1911	Apr. 12, 1912	Granville Power Co	"Elma" 〃
337	51·65	〃	1911	Apr. 12, 1912	Granville Power Co	"White Channel John, Min. Claim.
338	51·65	〃	1911	Apr. 12, 1912	Granville Power Co	"Stella" 〃
340	22·3	〃	1911	Apr. 12, 1912	John Lee	Surface.

GROUP No. 5.

Lot No.	Acres.	Surveyor.	Year of Survey.	Date of Approval.	Claimant.	Remarks.
115	45·56	H. G. Dickson	1908	Jan. 2, 1912	William Clark	"Verona" Mineral Claim.
162	43·39	〃	1912	Apr. 12, 1912	H. G. Dickson	"Spring Creek" 〃
173	160·00	〃	1910	Sept. 26, 1911	Karl Weik	"Keewenaw" 〃
174	51·65	〃	1910	Sept. 26, 1911	〃	"Gladstone" 〃
175	37·19	〃	1910	Jan. 5, 1912	〃	Surface.
201	50·02	〃	1910	Sept. 26, 1911	〃	"Northwest" Mineral Claim.
202	46·50	〃	1910	Sept. 26, 1911	〃	"Poppy" 〃
203	41·64	〃	1910	Sept. 26, 1911	〃	"Leary" 〃
204	50·06	〃	1910	Sept. 26, 1911	〃	"Evening Star" 〃
205	46·53	〃	1910	Sept. 26, 1911	〃	"Monteray" 〃
206	51·65	〃	1910	Sept. 26, 1911	〃	"Star Ruby" 〃
207	44·71	〃	1910	Sept. 26, 1911	〃	"Wild Rose" 〃
208	51·65	〃	1910	Sept. 26, 1911	〃	"Big Four" 〃
209	50·58	〃	1910	Sept. 26, 1911	〃	"Alice" 〃
210	50·90	〃	1910	Sept. 26, 1911	〃	"Solo" 〃
211	43·67	〃	1910	Sept. 26, 1911	〃	"Brimstone No. 1" Min. Cl.
212	50·24	〃	1910	Sept. 26, 1911	〃	"King Bee" 〃
213	23·39	〃	1910	Sept. 26, 1911	〃	"J. C." 〃
214	44·62	〃	1910	Sept. 26, 1911	〃	"Vivian" 〃
215	33·76	〃	1910	Sept. 26, 1911	〃	"White Pass" 〃
216	38·02	〃	1910	Sept. 26, 1911	〃	"Skagway" 〃
217	40·45	〃	1910	Sept. 26, 1911	〃	"Yukon" 〃
218	24·94	〃	1910	Sept. 26, 1911	〃	"Bismark" 〃
219	51·65	〃	1910	Sept. 26, 1911	〃	"Contact" 〃
220	39·78	〃	1910	Sept. 26, 1911	〃	"Zelandian" 〃
221	25·92	〃	1910	Sept. 26, 1911	〃	"Rawhide" 〃
222	64·61	〃	1911	Dec. 29, 1911	J. O. Williams *et al.*	"May" 〃
223	23·89	〃	1911	Dec. 29, 1911	〃	"Shamrock" 〃

GROUP No 6.

Lot No.	Acres.	Surveyor.	Year of Survey.	Date of Approval.	Claimant.	Remarks.
115	51·65	H. G. Dickson..	1910	....	A. R. Auston *et al*.........	"Utah" Min. Claim.
116	51·08	" ..	1910	....	"	"Rambler" "
117	45·38	" ..	1910	....	"	"Montana" "
118	51·65	" ..	1910	....	"	"Colorado" "
119	50·09	" ..	1910	....	"	"Texas" "
120	49·68	" ..	1910	....	"	"Reco" "

GROUP No. 10.

Lot No.	Acres.	Surveyor.	Year of Survey.	Date of Approval.	Claimant.	Remarks.
15	51·65	H. G. Dickson..	1910	May 31, 1911...	John McMeekin *et al*.......	"Bonanza" Min. Cl.
16	160·00	"	1910	May 31, 1911...	"	"County Antrim" Min. Claim.
17	51·65	"	1910	Jan. 5, 1912...	Karl Anderson........... .	"Sunnyside" "
19	51·20	"	1910	May 31, 1911 ..	John McMeekin *et al*.	"Eldorado" "
20	43·81	" ...	1910	May 31, 1911...	"	"Hazel May" "
21	30·71	"	1910	May 31, 1911...	"	"Leroy" Fractional Min. Claim.
22	10·49	"	1911	Sept. 25, 1911..	S. Rawlinson........	Surface.
27	31·82	"	1910	Apr. 12, 1912...	Thos. E. Bee *et al*....	"North Star" M. Cl.
28	48·75	"	1910	Apr. 12, 1912. .	"	"South Star" "
29	15·33	"	1910	Apr. 12, 1912...	"	Surface.
30	15·70	"	1910	May 31, 1911...	John McMeekin *et al*.......	"Star" Fract. M. Cl.
31	9·93	" .. .	1910	Sept. 25, 1911...	Thos. E. Bee.	Surface.
32	5·10	"	1910	Sept. 25, 1911...	C. F. Mack................	Surface.

GROUP No. 15.

Lot No.	Acres.	Surveyor.	Year of Survey.	Date of Approval.	Claimant.	Remarks.
3	5·65	H. G. Dickson..	1911	Jan. 4, 1912...	Harry Chambers...........	Surface.

APPENDIX No. 4.

List of miscellaneous surveys in the Yukon Territory, returns of which have been received from April 1, 1911, to March 31, 1912.

Year.	Surveyor.	Description of Survey.
1904	C. W. MacPherson.........	Yukon Crossing-Whitehorse division, in fifteen sections of ten miles each, of the Dawson-Whitehorse road.
1911	H. G. Dickson..............	Last division of Carmack's reference traverse for the Department of the Interior.

APPENDIX No. 5.

STATEMENT of work executed in the office of the Chief Draughtsman:—

Letters of instruction to surveyors	241
Progress sketches received and filed	1,142
Declarations of settlers received and filed	86
Returns of timber berths received	29
Plans received from surveyors	330
Field books received from surveyors	552
Timber reports received	235
Observations for magnetic declination received	746
Preliminary township plans prepared	328
Sketches made	5,995
Maps and tracings made	80
Plans of Yukon lots received	64
Plans of miscellaneous Yukon surveys received	16
Returns of surveys examined—	
Township subdivision	276
Township outline	252
Road plans	293
Railway plans	180
Yukon lots	64
Miscellaneous Yukon surveys	16
Mineral claims	51
Timber berths	49
Correction and other miscellaneous surveys	196
Township plans compiled	500
Townsite settlement and other plans compiled	19
Proofs of plans examined	34
Township plans printed	797
Townsite and settlement plans printed	11
Miscellaneous plans printed	106
Descriptions written	11
Areas calculated	1,635
Pages of field notes copied	343
Applications for various information dealt with	2,973
Files received and returned	1,848
Letters and memoranda drafted	8,711
Books received from Record Office and used in connection with office work	5,266
Books returned to Record Office	5,417
Plans other than printed township plans received from Record Office and used in connection with office work	951
Plans returned to Record Office	890
Volumes of plans received from Record Office and used in connection with office work	140
Volumes of plans returned to Record Office	129
Books sent to Record Office to be placed on record	484
Plans other than township plans sent to Record Office to be placed on record	137
Sectional maps (3 miles to 1 inch)—	
Revised	43
Reprinted	34
Sectional maps (6 miles to 1 inch)—	
Reprinted	23

APPENDIX No. 6.

LIST of new editions of Sectional Maps compiled from April 1, 1911, to March 31, 1912.

Scale 3 miles to one inch.

No.	Name.	No.	Name.	No.	Name.	No.	Name.
18	Wood Mountain	119	Regina	172	Fairford	271	Mossy Portage
23	Emerson	120	Qu’Appelle	173	Washow	313	Brulé
64	Porcupine	121	Riding Mountain	213	Athabaska	318	Shell River
65	Macleod	122	Manitoba House	214	Rocky Mt. House	319	Prince Albert North
68	Swift Current	123	Fort Alexander	216	Sullivan Lake	320	Carrot River
70	Moose Mountain	163	Donald	221	Swan River	366	Saddle Lake
71	Brandon	165	Rosebud	266	Ribstone Creek	462	Dunvegan
72	Portage la Prairie	169	Touchwood	269	Prince Albert South		
73	Winnipeg	170	Yorkton	270	Pasquia		

Scale 6 miles to one inch.

No.	Name.	No.	Name.	No.	Name.	No.	Name.
20	Souris	71	Brandon	169	Touchwood	219	Humboldt
21	Turtle Mountain	72	Portage la Prairie	172	Fairford	221	Swan River
64	Porcupine	73	Winnipeg	173	Washow	267	Battleford
68	Swift Current	118	Rush Lake	214	Rocky Mt. House	268	Carlton
69	Moosejaw	120	Qu’Appelle	216	Sullivan Lake	366	Saddle Lake
70	Moose Mountain	163	Donald	218	Saskatoon		

APPENDIX No. 7.

STATEMENT of work executed in the Photographic Office from April 1, 1911 to March 31, 1912.

—	3¼ x 3¼	3¼ x 5½	5 x 7	8 x 10	10 x 12	11 x 14	15 x 18	16 x 18	18 x 20	20 x 24	24 x 30	24 x 32	30 x 36	32 x 49	36 x 42	42 x 48	Total.
Dry plates and films	.....	580	832	.....	.....	23	....										1,435
Bromide prints	....	18	4	17	5	344	.....	80	96	13	24	.....	24	.....	38	69	732
Soho prints	.....	.....	1,081	202	.....	29	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,312
Velox prints	366	6,522	3,664	13	57	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10,622
Artura prints	.....	332	1,027	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,363
Vandyke prints	.....	.....	8	10	13	18	.....	56	82	48	62	.....	114	.....	99	9	519
Blue prints	.....	42	8	25	74	47	.....	85	90	79	140	.....	104	.....	61	98	853
Lantern transparencies	195	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	195
Photographs mounted	....	443	614	21	1	15	.....	22	16	.....	4	.....	.....	.....	.....	.....	1,136
Wet plate negatives	.....	.....	....	67	.....	174	105	978	116	21	.....	2	.....	.....	.....	.....	1,463
Photo-litho plates	.....	.....	.....	.....	.....	.....	.....	.....	1,114	.....	.....	.....	.....	27	.....	.....	1,141
Totals	561	7,937	7,238	359	150	650	105	1,221	1,514	161	230	2	242	27	198	176	20,771

APPENDIX No. 8.

STATEMENT of work executed in the Lithographic Office from April 1, 1911, to March 31, 1912.

Month.	Maps.			Township plans.			Forms.		
	No.	Copies.	Impressions.	No.	Copies.	Impressions.	No.	Copies.	Impressions.
1911.									
April	8	4,000	4,000	122	24,400	24,400	1	600	1,200
May	11	7,150	15,375	38	7,600	8,200	2	10,600	10,600
June	1	150	150	1	200	200	4	375	375
July	15	4,400	5,225	87	17,400	18,400	2	550	650
August	15	11,025	26,825	58	11,600	12,800	9	4,000	4,900
September	13	5,950	7,125	155	31,000	31,000	7	6,260	6,260
October	16	7,250	7,250	37	7,206	7,206	3	720	920
November	8	3,820	3,820	158	31,600	31,600	3	2,220	2,220
December	10	4,500	4,500	98	19,600	19,600	......	....	....
1912.									
January	11	16,280	71,075	55	11,000	12,000	9	19,925	22,925
February	9	4,125	5,250	.....	....	....	4	2,500	2,500
March	17	87,825	156,140	32	6,400	6,400	6	15,200	15,200
Total	134	156,475	306,735	841	168,006	171,806	50	62,950	67,750

RECAPITULATION.

——	No.	Copies.	Impressions.	Cost.
Maps	134	156,475	306,735	2,734 00
Townships	841	168,006	171,806	4,060 00
Forms	50	62,950	67,750	850 00
Grand total	1,025	387,431	546,291	7,644 00

APPENDIX No. 9.

LIST of employes of the Topographical Surveys Branch at Ottawa, giving the name, classification, duties of office and salary of each. (Metcalfe street, corner of Slater.)

Name.	Classification.		Duties of Office.	Salary.
	Division.	Sub-division.		
				$
Deville, E., D.T.S., LL.D	1	A	Surveyor General	3,650
	Correspondence.			
Brady, M	1	B	Secretary	2,400
Cullen, M.J	3	A	Stenographer	1,200
Moran, J. F.	3	A	Typewriter and clerk	900
Williams, E.R	3	A	Correspondence clerk	900
Addison, W.G	3	B	Typewriter	800
Pegg, A			Messenger	800
O'Meara, M.T			"	550
Pick, A.C			"	500
	Accounts.			
Hunter, R.H	2	A	Accountant	2,100
Wilkinson, Percy	3	A	Asst. Accountant	1,100

Chief Draughtsman's Office—General direction and supervision of the technical work.

Shanks, T., B.A.Sc., D.L.S	1	B	Chief draughtsman	2,550
Brown, T. E., B.A	1	B	Asst. chief draughtsman	2,550

Chief Draughtsman's Office, First Section—Survey instructions and general information.

Name.	Classification.		Duties of Office.	Salary.
	Division	Sub-division.		
				$
Barber, H. G., Grad. S.P.S	2	A	Chief of section	1,900
Rice, F. W., Grad. School of Mining	2	A	Asst. chief of section	1,900
MacIlquham, W. L., B.Sc	2	A	" "	1,900
Peaker, W. J., Grad. S.P.S	2	A	" "	1,600
Sylvain, J	2	A	" "	1,650
Carroll, M. J., Grad. S.P.S	2	B	Draughtsman	1,600
Rochon, E. C	2	B	"	1,400
McRae, A. D., B.A., B.Sc	2	B	"	1,400
Grant, A. W., B.A	2	B	"	1,400
Hayward, H. E., B.Sc	2	B	"	1,300
Milliken, J. B., B.A., B.Sc	2	B	"	1,300
MacMillan, J.P., B.E	2	B	"	1,300
Wadlin, L. N., B.Sc	2	B	"	1,200
Cordukes, J. P., B.Sc	2	B	"	1,200
Gagnon, J. N. H., B.A.S	2	B	"	1,050
Armstrong, W. B., B.Sc	2	B	"	1,200
Spero, J. E	2	B	"	1,200
Nevins, L. A., B.A	2	B	"	1,200
McDonald, J. F., B.A	2	B	"	1,200
Holbrook, C. H	3	A	Clerk	950
Burkholder, E. L	3	A	"	900

Chief Draughtsman's Office, Second Section—Surveys in Manitoba, Saskatchewan, Alberta and Yukon Territory.

Nash, T. S., Grad. S.P.S., D.L.S	1	B	Chief of section	2,550
Burgess, E. L., Grad. S.P.S., D.L.S., O.L.S	2	A	Asst. chief of section	1,900
Dennis, E. M., B.Sc	2	A	" "	1,900
Elder, A. J., Grad. S.P.S., D.L.S	2	A	" "	1,900
Henderson, F. D., Grad. S.P.S., D.L.S	2	A	" "	1,900
Hill, S. N., Grad. S.P.S	2	A	" "	1,900
Genest, P. F. X., Q.L.S	2	A	" "	1,900
Robertson, D. F., Grad. S.P.S	2	A	" "	1,700
Kitto, F.H., D.L.S	2	A	In charge of Dawson office	1,600
Sutherland, H. E., B.Sc	2	B	Draughtsman	1,400
McClennan, W. D	2	B	"	1,600
Roger, A., O.L.S	2	B	"	1,600
Spreckley, R. O	2	B	"	1,500
Goodday, Leonard	2	B	"	1,400
Bray, ... P	2	B	"	1,400
Harrison, E. W	2	B	"	1,300
Ault, H. W	2	B	"	1,300
Lytle, W. J	2	B	"	1,050
LaBeree, E. E.	2	B	"	1,050
Jones, G. S., Grad. S.P.S., O.L.S	2	B	"	1,050
Bradley, J. D	2	B	"	1,050
Cagnat, G. H	2	B	z	1,050
Fournier, O. E., B.A.S	2	B	"	1,050
Thomas, A. S., B.Sc	2	B	"	1,200
Smith, H. C	2	B	"	1,200
Macdonald, J. A	3	B	Clerk	800

Chief Draughtsman's Office, Third Section—(Imperial Building, Queen street).
Copying plans for reproduction.

Name.	Classification.		Duties of Office.	Salary.
	Division	Sub-division.		
				$
Engler, Carl., B. A., D.L.S.	1	B	Chief of section	2,100
May, J. E	2	A	Asst. chief of section	1,900
O'Connell, J. R	2	A	Draughtsman	1,700
Moule, W. J	2	B	"	1,600
Helmer, J. D	2	B	"	1,100
Dawson, R. J	2	B	"	1,100
Archambault, E	2	B	"	1,100
Clarke, G. N	2	B	"	800
Watters, James	3	A	Printer	1,200
McLennan, A. G	3	A	Clerk	1,200
Brown, A	3	A	"	900
Ebbs, E. J	3	A	"	900
Baril, C	3	B	Draughtsman	750

Chief Draughtsman's Office, Fourth Section—(Metcalfe street, corner of Slater).
British Columbia surveys.

Rowan-Legg, E. L	2	A	Chief of section	2,050
Gillmore, E. T. B., Grad. R.M.C	2	A	Asst. chief of section	2,000
Lawe, H., D.L.S	2	A	" "	1,900
Morley, R. W	2	A	" "	1,900
Weld, W. E	2	A	" "	1,900
Wilson, E. E. D., B. Sc	2	A	" "	1,600
Harris, K. D	2	B	Draughtsman	1,300

Chief Draughtsman's Office, Fifth Section—(Imperial Building, Queen street).
Mapping.

Smith, J	1	B	Chief of section	2,550
Begin, P. A	2	A	Asst. chief of section	1,950
Flindt, A. H	2	A	" "	1,700
Blanchet, A. E	2	B	Draughtsman	1,600
Davies, T. E. S	2	B	"	1,600
Perrin, V	2	B	"	1,600
D'Orsonnens, A	2	B	"	1,600
Davy, E	2	B	"	1,400
Villeneuve, E	2	B	"	1,100
Bergin, W	2	B	"	1,100
Howie, Jas	2	B	"	1,000
Purdy, W. A	2	B	"	1,100
Brigly, J. H	2	B	"	1,300

Chief Draughtsman's Office, Sixth Section—(Imperial Building, Queen street). Scientific and topographical work.

Name.	Classification.		Duties of Office.	Salaries.
	Division	Sub-division		
				$
Dodge, G. B., D.L.S.	1	B	Chief of section.	2,550
Coté, J. A., Grad. R.M.C.	2	A	Asst. chief of section	1,600
Watt, G. H., Grad. S.P.S., D.L.S.	2	A	" "	1,900
Blanchard, J. F.	2	B	Draughtsman	1,050
Chartrand, D. E., B.Sc.	2	B	"	1,100
Colquhoun, G.A., B.Sc.	2	B	"	1,200
Cousineau, A., B.Sc.	2	B	"	1,100
Dozois, L. O. R., Grad. R.M.C	2	B	"	1,100
Freeland, J. J., M.A.	2	B	"	1,200
Herbert, W. H., B.Sc.	2	B	"	1,200
Parry, H., B.Sc., D.L.S.	2	B	"	1,000
Ross, R.C., B.Sc.	2	B	"	1,200
Lynch, F. J.	3	B	Typewriter.	800
Watson, J. W.	3	B	Clerk.	750

Geographic Board (Woods Building, Slater street).

Whitcher, A. H., F.R.G.S., D.L.S.	2	A	Secretary	2,100 00

Photographic Office (Metcalfe street, corner Slater street).

Carruthers, H. K	2	A	Process photographer.	1,900
Woodruff, John	2	A	Chief "	1,900
Smith, L. G.	2	B	Photographer.	800
Whitcomb, H. E.	3	A	"	1,200
Morgan, W. E.	3	A	"	1,200
Kilmartin, A.	3	A	Asst. photographer.	900
Devlin, A.	3	B	"	800
Ouimet, E. G.	3	B	"	800

Lithographic Office (unclassified) (Metcalfe street, corner Slater street).

Name.	Occupation.	Salaries.
Moody, A.	Foreman	$27 00 per week.
Burnett, E.	Lithographer	25 00 "
Thicke, C. R	"	23 00 "
Deslauriers, J. H.	Transferrer	20 00 "
Bergin, J.	Printer	21 00 "
Thicke, H. S.	"	20 00 "
Boyle, S.	Stone polisher	15 00 "
Gagnon, J.	Press feeder	12 00 "
Kane, P.	"	9 50 "
Easton, R. M.	Printer	19 50 "
Hare, E. H.	Asst. photographer	15 00 "

APPENDIX No. 10.

LIST of Dominion Land Surveyors who have been supplied with Standard Measures.

Name.	Address.	Date of Birth.	Date of Appointment or of Commission.	Remarks.
Akins, James Robert	Ottawa, Ont	Sept. 2, '76	Mar. 14, '10	
Allison, Calvin Bruce	South Woodslee, Ont.	June 16, '84	Mar. 28, '10	
Ashton, Arthur Ward	Ottawa, Ont	Nov. 5, '80	May 29, '08	
Austin, George Frederick	Not known		April 14, '72	
Aylen, John	North Bay, Ont		May 29, '85	
Aylsworth, Charles Fraser	Madoc, Ont	April 21, '62	May 13, '86	O. L. S.
Baker, James Clarence	Vermilion, Alta	May 12, '78	May 18, '06	
Baker, Mason Hermon	St. Thomas, Ont	July 9, '84	Aug. 6, '08	O. L. S.
Bartlett, Ernest	Smithville, Ont	'83	Jan. 16, '11	
Bayne, George A	Winnipeg, Man	Oct. 25, '50	April 14, '72	M. L. S.
Beatty, David	Parry Sound, Ont	Dec. 22, '42	April 14, '72	O. L. S.
Begg, William Arthur	Hamilton, Ont	July 15, '82	June 8, '09	
Belanger, Phidime Roch-Arthur	Ottawa, Ont	Mar. 5, '53	May 17, '80	Inspector of Surveys, Topographical Surveys Branch, Dept. of the Interior.
Belleau, Joseph Alphonse	Ottawa, Ont	Sept. 30, '56	May 15, '83	Topographical Surveys Branch, Dept. of the Interior.
Belyea, Albert Palmer Corey	Edmonton, Alta		July 14, '09	
Bemister, George Bartlett	Winnipeg, Man		June 11, '78	M. L. S. Engineering Dept. C. N. R.
Bennett, George Arthur	Eden, Ont	May 18, '86	Aug. 25, '10	
Berry, Edward Wilson	Seaforth, Ont	Aug. 26, '81	May 18, '11	
Bigger, Charles Albert	Ottawa, Ont	Aug. 15, '53	Mar. 30, '82	B.C.L.S., O.L.S., Assistant Superintendent Geodetic Survey.
Bingham, Edwin Ralph	Fort William, Ont	'78	Oct. 25, '06	O. L. S.
Blanchet, Guy Houghton	Ottawa, Ont	Feb. 12, '84	Mar. 10, '10	
Boswell, Elias John	Not known		Mar. 18, '03	O. L. S., M. L. S.
Bourgeault, Armand	St. Jean Port Joli, Que	Feb. 23, '58	Mar. 29, '83	Q. L. S.
Bourgault, Charles Eugene	Lauzon, Levis, Que.	Sept. 6, '61	Feb. 21, '88	
Bourget, Charles Arthur	Lauzon, Que	Aug. 26, '51	May 14, '84	Q. L. S.
Bowman, Edgar Peterson	West Montrose, Ont.		Sept. 26, '07	O. L. S.
Bowman, Herbert Joseph	Berlin, Ont	June 18, '65	Feb. 16, '88	O. L. S.
Brabazon, Alfred James	Ottawa, Ont		May 13, '82	Boundary Survey, Dept. of the Interior.
Brady, James	Golden, B. C	Nov. 24, '40	April 14, '72	O. L. S., B. C. L. S.
Bray, Samuel	Ottawa, Ont	Nov. 5, '46	Nov. 14, '83	O. L. S., Chief Surveyor, Dept. of Indian Affairs.
Bray, Lennox Thomas	Amherstburg, Ont	Mar. 14, '77	Feb. 18, '03	O. L. S.
Brenot, Lucien	Ottawa, Ont	Aug. 31, '87	Mar. 18, '10	
Bridgland, Morrison Parsons	Calgary, Alta	Dec. 20, '78	Mar. 10, '05	
Broughton, George Henry	Penticton, B.C	Aug. 12, '86	June 3, '09	B. C. L. S.
Brown, Charles Dudley	Winnipeg, Man	Feb. 25, '83	April 4, '10	
Brown, Edgar Carl	Regina, Sask	Nov. 28, '86	May 23, '11	
Brown, Thomas Wood	Edmonton, Alta		June 21, '09	
Brownlee, James Harrison	Vancouver, B.C	Mar. 22, '56	April 15, '87	M. L. S., B. C. L. S.
Bucknill, Walter Birch	Vancouver, B.C	May 8, '73	Mar. 19, '08	B. C. L. S.
Burd, James Henry	Weyburn, Sask	Sept. 7, '71	May 18, '11	O. L. S., S. L. S.
Burgess, Edward LeRoy	Ottawa, Ont	May 5, '78	Feb. 23, '05	O. L. S., T. S. Branch, Dept. of Interior.
Burnet, Hugh	Victoria, B.C		June 22, '85	O. L. S., B. C. L. S.
Burwash, Nathaniel Alfred	Whitehorse, Y.T	Sept. 28, '79	Mar. 6, '07	O. L. S.
Burwell, Herbert Mahlon	Vancouver, B.C	Oct. 23, '63	Feb. 17, '87	B. C. L. S.
Campbell, Alan John	Sidney, B.C	Oct. 1, '82	April 13, '09	
Campbell, Alexander Stewart	Kingston, Ont	Mar. 7, '80	Mar. 6, '09	
Carbert, Joseph Alfred	Medicine Hat, Alta	Feb. 4, '56	May 12, '80	O.L.S., District Engineer and Surveyor, Dept. of Public Works, Alberta.
Carpenter, Henry Stanley	Regina, Sask	Feb. 8, '74	Feb. 20, '01	Dept. of Public Works, O. L. S.
Carroll, Cyrus	Regina, Sask	Dec. 6, '34	April 14, '72	O. L. S.

APPENDIX No. 10.—*Continued.*

LIST of Dominion Land Surveyors who have been supplied with Standard Measures—*Continued.*

Name.	Address.	Date of Birth.	Date of Appointment or of Commission	Remarks.
Carson, Percy Alexander	Kamloops, B.C.	Dec. 25, '77	Feb. 22, '06	Hydrographic Survey.
Carthew, William Morden	Edmonton, Alta	Oct. 19, '86	Mar. 29, '10	
Cautley, Reginald Hutton	Edmonton, Alta	Dec. 6, '79	May 1, '05	
Cautley, Richard William	Edmonton, Alta	Aug. 3, '73	Sept. 2, '96	
Cavana, Allan George	Orillia, Ont	Jan. 22, '58	Nov. 16, '76	O.L.S.
Charlesworth, Lionel Clare	Edmonton, Alta	Nov. 17, '73	Mar. 24, '03	O.L.S., Dept. of Public Works for Alberta.
Chase, Albert Victor	Orillia, Ont	Mar. 4, '83	Oct. 11, '10	O.L.S.
Chilver, Charles Alonzo	Walkerville, Ont	Feb. 8, '83	Feb. 22, '07	
Christie, William	Prince Albert, Sask.	Feb. 13, '76	Mar. 22, '06	
Clarke, Charles Wentworth	Regina, Sask	Nov. 19, '75	Mar. 24, '10	
Cleveland, Ernest Albert	Vancouver, B.C	May 12, '74	June 27, '99	B.C.L.S.
Coates, Preston Charles	Whaletown, B.C	May 16, '81	Apr. 19, '07	B.C.L.S.
Cokely, Leroy S.	Merritt, B.C	Nov. 23, '84	Mar. 22, '10	
Côté, Joseph Adélard	Prince Albert, Sask.	June 5, '64	May 14, '84	
Côté, Jean Léon	Edmonton, Alta	May 6, '67	Mar. 21, '90	
Cotton, Arthur Frederick	New Westminster, B.C	Aug. 8, '52	May 11, '80	O.L.S., B.C.L.S.
Craig, John Davidson	Ottawa, Ont	Jan. 30, '76	Feb. 24, '02	Boundary Surveys, Dept. of the Interior.
Cumming, Austin Lewis	Cornwall, Ont	Aug. 25, '82	Feb. 3, '10	
Cummings, Alfred	Fernie, B.C	July 3, '80	Mar. 3, '09	B.C.L.S.
Cummings, John George	Cranbrook, B. C	Nov. 19, '73	Feb. 17, '04	B.C.L.S.
Dalton, John Joseph	Weston, Ont	June 12, '54	Apr. 17, '79	O.L.S., D.T.S.
Davies, Thomas Attwood	Edmonton, Alta		Feb. 22, '06	
Dawson, Frederick James	Ashcroft, B.C	Sept. 22, '86	Sept. 12, '10	
Day, Harry Samuel	St. John, N. B.	Nov. 14, '85	Mar. 9, '10	
Deans, Williams James	Brandon, Man	May 4, '60	May 13, '86	O L.S.
de la Condamine, C.	High River, Alta	Feb. 13, '75	May 4, '10	
Dennis, John Stoughton	Calgary, Alta	Oct. 22, '56	Nov. 19, '77	D.T.S.
Denny, Herbert C.	Not known		Apr. 1, '82	
Dickson, Henry Godkin	Whitehorse, Y. T.	Mar. 29, '64	Mar. 19, '89	M.L.S.
Dickson, James	Fenelon Falls, Ont	Oct. 30, '34	Apr. 14, '72	O.L.S.
Dobie, James Samuel	Thessalon, Ont	Oct. 15, '73	Mar. 22, '06	O L.S.
Doupe, Jacob Lonsdale	Winnipeg, Man	Sept. 14, '67	Oct. 6, '88	M.L.S., Asst. Land Commissioner for C.P.R.
Drewry, William Stewart	Nelson, B.C	Jan. 20, '59	Nov. 14, '83	O.L.S., B.C.L.S.
Driscoll, Alfred	Edmonton, Alta	July 2, '65	Feb. 23, '87	B.C.L.S.
Drummond, Thomas	Montreal, P.Q	1856	June 24, '78	D.T.S.
Ducker, William A	Winnipeg, Man	Apr. 4, '52	Mar. 30, '83	O.L.S., M.L.S.
Dumais, Paul T. Concorde	Hull, P.Q	Jan. 2, '47	Mar. 29, '82	Q.L.S.
Earle, Wallace Sinclair	Victoria, B.C.	Feb. 8, '89	May 18, '11	
Edwards, George	Ponoka, Alta	June 13, '42	Apr. 14, '72	O.L.S.
Edwards, William Milton	Lethbridge, Alta	June 21, '79	Apr. 5, '10	
Ellacott, Charles Herbert	Victoria, B.C.	Dec. 24, '66	Feb. 22, '99	B.C.L.S.
Empey, John Morgan	Calgary, Alta	Apr. 16, '74	Feb. 23, '05	O.L.S
Engler, Carl	Ottawa, Ont	Sept. 30, '72	Feb. 23, '05	T.S. Branch, Dept. of Interior.
Fairchild, Charles Courtland	Brantford, Ont.	Feb. 21, '67	Feb. 20, '01	O.L.S.
Farncomb, Alfred Ernest	Edmonton, Alta	May 22, '73	Mar. 12, '02	O.L.S.
Fawcett, Thomas	Ottawa, Ont	Oct. 28, '48	Nov. 18, '76	O.L.S., D.T.S. Boundary Surveys, Dept. of Interior.
Fawcett, Adam	Gravenhurst, Ont.		Feb. 22, '93	
Ferguson, George Hendry	Toronto, Ont	Jan. 20, '83	June 2, '09	
Findlay, Allan	Winnipeg, Man	Oct. 15, '80	Mar. 21, '08	
Fletcher, James Allan	Fletcher, Ont	Mar. 26, '89	May 18, '11	
Fontaine, Louis Elie	Levis, P.Q	Oct. 3, '68	Nov. 30, '92	
Francis, John	Portage la Prairie, M	Dec. 22, '52	June 17, '75	M.L.S.
Galletly, James Simpson	Brooklin, Ont.	Apr. 15, '88	May 18, '11	
Garden, James Ford	Vancouver, B. C	Feb. 19, '47	May 13, '80	B.C.L.S.
Garden, George H	Lethbridge, Alta		Apr. 14, '72	Deputy Surveyor for N.B.
Garden, Charles	Not known		Apr. 14, '72	Deputy Surveyor for N.B.

APPENDIX No. 10.—*Continued.*

LIST of Dominion Land Surveyors who have been supplied with Standard Measures—*Continued.*

Name.	Address.	Date of Birth.	Date of Appointment or of Commission.	Remarks.
Garner, Albert Coleman	S. Qu'Appelle, Sask.	Sept. 6, '78	May 27, '07	
Gauvreau, Louis Pierre	Not known		Apr. 14, '72	
Gibbon, James	Vancouver, B.C	June 25, '60	Feb. 12, '91	O.L.S.
Glover, Arthur Edward	Toronto, Ont.	Mar. 4, '87	Mar. 11, '11	
Gordon, Maitland Lockhart	Vancouver, B.C		Feb. 18, '04	B.C.L.S.
Gordon, Robert John	Lethbridge, Alta	June 18, '69	Mar. 12, '02	
Gore, Thomas Sinclair	Victoria, B.C.	1852	Apr. 19, '79	B.C.L.S.
Graham, John Robertson	Vancouver, B.C	Apr. 18, '87	May 26, '10	
Gray, James Edward	Toronto, Ont.	Oct. 12, '81	Mar. 11, '11	
Green, Alfred Harold	Nelson, B.C	Jan. 20, '79	Feb. 23, '05	B.C.L.S.
Green, Thomas Daniel	Ottawa, Ont	Dec. 21, '57	May 19, '84	O. L. S.
Green, Frank Compton	Nelson, B. C		May 8, '03	B. C. L. S.
Grover, George Alexander	Toronto, Ont		Feb. 18, '04	
Hamilton, Charles Thomas	Vancouver, B. C	July 29, '84	May 18, '11	
Hamilton, James Frederick	Lethbridge, Alta	Apr. 4, '69	June 2, '09	
Harris, John Walter	Winnipeg, Man.	Feb. 26, '45	Apr. 14, '72	O. L. S., M. L. S., City Surveyor.
Harrison, Edward	Belleville, Ont		May 14, '10	
Harvey, Charles	Kelowna, B. C	May 5, '76	Feb. 17, '04	B. C. L. S.
Hawkins, Albert Howard	Listowel, Ont	July 27, '62	Mar. 6, '06	
Heaman, John Andrew	Winnipeg, Man	June 3, '75	July 15, '09	O. L. S.
Heathcott, Robert Vernon	Edmonton, Alta	July 7, '81	May 13, '07	
Henderson, Walter	Not known		Nov. 17, '83	
Herriot, George Henry	Souris, Man	Feb. 23, '83	Sept. 18, '09	
Heuperman, Frederick Justinus.	Calgary, Alta	July 23, '87	Mar. 13, '11	
Heuperman, Lambertus Fred.	Calgary, Alta	Sept. 20, '81	Mar. 29, '10	
Hobbs, Wilfrid Ernest	Winnipeg, Man	Mar. 12, '87	Mar. 5, '12	
Holcroft, Herbert Spencer	Toronto, Ont	Sept. 4, '77	Feb. 18, '03	O. L. S.
Hopkins, Marshall Willard	Edmonton, Alta	May 24, '61	Feb. 20, '01	O. L. S.
Hubbell, Ernest Wilson	Ottawa, Ont	Nov. 5, '62	May 19, '84	Inspector of Surveys, Topographical Surveys Branch, Dept. of Interior.
Inkster, Oluff	Edmonton, Alta	Mar. 25, '85	May 18, '11	
James, Silas	Toronto, Ont	June 19, '34	Apr. 14, '72	O. L. S.
Jephson, Richard Jermy	Brandon, Man	Feb. 5. '54	May 12, '80	O. L. S., B. C. L. S.
Johnson, Alfred William	Kamloops, B. C	Feb. 23, '74	Mar. 12, '02	B. C. L. S.
Keith, Homer Pasha	Edmonton, Alta	Aug. 30, '85	Feb. 1, '11	
Kimpe, Maurice	Edmonton, Alta	Jan. 17, '76	May 13, '07	
King, William Frederick	Dominion Observatory, Ottawa, Ont.	Feb. 19, '54	Nov. 21, '76	D.T.S. Chief Astronomer Dept. of Interior.
Kirk, John Albert	Summerland, B. C.	Jan. 9, '54	May 11, '80	O. L. S., B. C. L. S.
Kitto, Franklin Hugo	Dawson, Y. T	Mar. 28, '80	Mar. 6, '08	
Klotz, Otto Julius	Dominion Observatory, Ottawa, Ont.	Mar. 31, '52	Nov. 19, '77	O. L. S., D. T. S., Astronomer, Dept. of Int.
Knight, Richard H	Edmonton, Alta	June 7, '77	Feb. 18, '04	
Lang, John Leiper	Toronto, Ont		Oct. 14, '08	
Latimer, Frank Herbert	Penticton, B. C.	May 23, '60	Nov. 13, '85	
Laurie, Richard C	Battleford. Sask	Jan. 31, '58	April 27, '83	
Lawe, Henry	Ottawa, Ont	Feb. 28, '38	April 14, '72	O. L. S., M. L. S., Topographical Surv. Branch Dept. of Interior.
Lemoine, Charles Errol	Ville Montcalme, P. Q		Mar. 31, '82	Q. L. S.
Lendrum, Robert Watt	Strathcona, Alta	July 24, '34	May 15, '80	O. L. S.
Lighthall, Abram	Vancouver, B. C	Mar. 30, '78	Dec. 25, '09	
Lindsay, James Herbert	Regina, Sask	Nov. 27, '82	May 18, '11	
Lonergan, Gerald Joseph	Buckingham, P. Q.	Oct. 8, '71	Feb. 28, '01	Q.L.S., Insp. of Surveys. Dept. of Interior.
Loucks, Roy Wm. Egbert	Saskatoon, Sask	Oct. 31, '84	Mar. 1, '12	
Lumsden, Hugh David	Ottawa, Ont	Sept. 7, '44	April 14, 72	O. L. S.
MacLennan, Alexander L.	Toronto, Ont.	May 10, '78	Feb. 23, '05	
MacPherson, Charles Wilfrid	Dawson, Y. T.	Sept. 6, '71	Mar. 7, '00	O. L. S.

APPENDIX No. 10.—*Continued.*

List of Dominion Land Surveyors who have been supplied with Standard Measures—*Continued.*

Name.	Address.	Date of Birth.	Date of Appointment or of Commission.	Remarks.
Magrath, Charles Alexander	Ottawa, Ont	April 22, '60	Nov. 16, '81	B. A. Sc., O.L.S.,B.C.L.S., D. T. S., Member International Waterways Commission.
Martindale. Ernest Smith	Kingsmill, Ont	May 20, '86	Mar. 11, '11	
Martyn, Oscar William	Mitchell, Ont	Dec. 2, '88	Mar. 11, '11	
Matheson, Hugh	Ottawa, Ont	May 2, '79	May 9, '11	
Meadows, William Walter	Maple Creek, Sask.	May 27, '73	Feb. 23, '05	O. L. S.
Miles, Charles Falconer	Toronto, Ont	Jan. 30, '38	Apr. 14, '72	O.L.S. Inspector of Surveys, Dept. of Interior.
Mitchell, Benjamin Foster	Calgary, Alta	June 16, '80	April 16, '08	A. L. S.
Moberly, Harford Kenneth	Moosomin, Sask	—— '69	April 21, '03	
Molloy, John	Winnipeg, Man.	Jan. 13, '40	April 14, '72	M. L. S.
Montgomery, Royal Harp	Prince Albert, Sask.	May 20, '82	Feb. 23, '05	O. L. S.
Moore, Herbert Harrison	Calgary, Alta	Dec. 1, '69	Feb. 17, '04	
Morrier, Joseph Eldedge	Prince Albert, Sask.	Aug. 29, '74	May 16, '07	
McArthur, James Joseph	Ottawa, Ont.	May 9, '56	April 17, '79	Boundary Survey, Dept. of Interior.
McCaw, Robert Daniel	Sidney, B. C	May 24, '83	Mar. 23, '09	
McColl, Gilbert Beebe	Winnipeg, Man	Oct. 8, '82	Mar. 20, '07	M.L.S., D.T.S.
McColl, Samuel Ebenezer	Winnipeg, Man	July 17, '86	May 18, '11	
McDiarmid, Stuart Stanley	Vancouver, B. C	Aug. 4, '81	Feb. 23, '05	B.C.L.S.
McEwen, Duncan Findlay	Edmonton, Alta	Aug. 7, '73	May 18, '11	
McFadden, Moses.	Vancouver, B. C	Aug. 26, '26	April 14, '72	O.L.S., M.L.S.
McFarlane, Walter Graham	Toronto, Ont.	Sept. 28, '75	May 19, '05	
McFarlane, John Baird	Toronto, Ont.	Feb. 25, '79	June 3, '08	
McFee, Angus	Red Deer, Alta.	July 14, '46	April 19, '79	
McGeorge, William Graham.	Chatham, Ont	Mar. 22, '87	Mar. 21, '10	
McGrandle, Hugh	Wetaskiwin, Alta	Mar. 12, '57	Mar. 30, '83	O.L.S.
McKenzie, John	New Westminster, B. C.	Oct. 31, '47	Nov. 18, '87	
McLean, James Keachie	Ottawa, Ont	Dec. 19, '51	April 1, '82	O.L.S. Dept. of Indian Affairs.
McMaster, William Angus Alexander	Palmerston, Ont	Feb. 1, '85	July 6, '10	
McMillan, George.	Finch, Ont.	Dec. 9, '69	Feb. 22, '06	
McNaughton, Alexander L	Cornwall, Ont	Sept. 30, '81	Feb. 23, '05	O.L.S., B.C.L.S.
McPherson, Archibald John.	Regina, Sask.	—— '70	Feb. 21, '01	
McPhillips, George	Winnipeg, Man	April 26, '48	June 17, '75	O.L.S., M.L.S.
McPhillips, Robert Charles	Winnipeg, Man	April 24, '56	May 17, '80	
McVittie, Archibald W	Victoria, B.C	May 5, '58	Mar. 30, '82	B.C.L.S.
Nash, Thomas Sanford	Ottawa, Ont	July 2, '75	Feb. 18, '04	Topographical Surveys Branch, Dept. of Inter.
Neville, Everett A.	Ruthven, Ont	Jan. 8, '87	May 18, '11	
Ogilvie, William	Ottawa, Ont	April 7, '46	April 14, '72	O.L.S.
O'Hara, Walter Francis.	Ottawa, Ont	....	Feb. 19, '95	O.L.S.
Ord, Lewis Redman	Hamilton, Ont	Oct 17, '56	April 1, '82	O.L.S.
Palmer, Philip, Ebenezer	Dorchester, N.B	Mar. 6, '88	Mar. 7, '12	
Parsons, Johnstone Lindsay R.	Regina, Sask.	Jan. 18, '76	Feb. 23, '05	O.L.S.
Patrick, Allan Poyntz	Calgary, Alta	July 18, '49	Nov. 19, '77	B.C.L.S., D.T.S.
Patten, Thaddeus James	Little Current, Ont.	Feb. 4, '59	Mar. 29, '83	O.L.S.
Pearce, William	Calgary, Alta	Feb. 1, '48	May 10, '80	O.L.S., B.C.L.S.
Pearce, Seabury Kains	Calgary, Alta	Dec. 6, '87	Mar. 9, '11	
Pequegnat, Marcel	Berlin, Ont	April 27, '86	June 6, '10	
Peters, Frederic Hatheway	Calgary, Alta	Nov. 4, '83	Mar. 4, '10	Commiss'er of Irrigation.
Phillips, Edward Horace	Saskatoon, Sask.	Dec. 19, '78	Feb. 24, '02	
Phillips, Harold Geoffrey	Saskatoon, Sask	Sept. 3, '87	April 23, '10	
Pierce, John Wesley	Ottawa, Ont	....	Dec. 24, '09	
Plunkett, Thomas Hartley	Meaford, Ont.	June 1, '78	Mar. 12, '08	
Ponton, Archibald William	Edmonton, Alta	Jan. 25, '59	May 18, '81	O.L.S.
Powell, William Henry	Vancouver, B.C	Dec. 22, '84	Feb. 22, '11	
Proudfoot, Hume Blake	Saskatoon, Sask	June 23, '58	Mar. 28, '82	O.L.S.
Purser, Ralph Clinton	Windsor, Ont.	April 7, '86	Feb. 2, '11	

APPENDIX No. 10.—*Continued.*

LIST of Dominion Land Surveyors who have been supplied with Standard Measures—*Continued.*

Name.	Address.	Date of Birth.	Date of Appointment or of Commission.	Remarks.
Rainboth, Edward Joseph	Ottawa, Ont		May 19, '81	Q.L.S., O.L.S.
Ransom, John Thomas	Toronto, Ont	Aug. 24, '88	Jan. 14, '11	
Reilly, William Robinson	Regina, Sask	Aug. 10, '57	Nov. 17, '81	O.L.S., M.L.S.
Richard, Joseph Francois	Ste. Anne de la Pocatière, P.Q		May 13, '82	
Rinfret, Claude	Montreal, P.Q	Jan. 5, '86	Mar. 20, '08	Q.L.S.
Rinfret, Raoul	Montreal, P.Q	July 16, '56	Feb. 20, '00	Q.L.S.
Ritchie, Joseph Frederick	Prince Rupert, B.C	May 23, '63	Jan. 7, '89	B.C.L.S.
Robertson, Henry H	N. Timiskaming, P.Q.	Sept. 13, '47	April 14, '72	Q.L.S.
Roberts, Sydney Archibald	Victoria, B.C	April 10, '48	May 16, '85	B.C.L.S.
Roberts, Vaughan Maurice	Goderich, Ont	Mar. 22, '64	May 17, '86	
Robinson, Ernest Walter P	Ottawa, Ont	May 8, '80	May 1, '08	
Robinson, Franklin Joseph	Regina, Sask	Oct. 20, '70	Feb. 20, '00	Deputy Minister of Public Works.
Rolfson, Orville	Walkerville, Ont	Feb. 26, '85	July 11, '08	
Rombough, Marshall Bedwell	Morden, Man	Oct. 14, '35	April 14, '72	M.L.S.
Rorke, Louis Valentine	Toronto, Ont	Feb. — '65	Aug. 13, '91	O.L.S. Inspector of Surveys for Ontario.
Ross, George	Welland, Ont	June 12, '53	Nov. 21, '82	O.L.S.
Ross, Joseph Edmund	Kamloops, B.C.	Jan. 9, '61	Feb. 12, '91	O.L.S., B.C.L.S.
Routly, Herbert Thomas	Haileybury, Ont	Jan. 20, '78	Feb. 15, '11	
Roy, George Peter	Quebec, P Q	Oct. 1, '52	Nov. 17, '81	Q.L.S.
Roy, Joseph George Emile	Quebec, P.Q	Mar. 14, '86	May 25, '10	
Saint Cyr, Jean Baptiste	Montreal, P.Q	Dec. 17, '66	Feb. 17, '87	Q.L.S.
Saint Cyr, Arthur	Ottawa, Ont	Nov. — '60	Feb. 17, '87	
Saunders, Bryce Johnston	Edmonton, Alta	Oct. 17, '60	Nov. 16, '84	O.L.S.
Scott, Walter Alexander	Galt, Ont	Aug. 8, '85	Mar. 9, '09	
Seager, Edmund	Kenora, Ont	Nov. 22, '38	April 14, '72	O.L.S.
Sewell, Henry DeQuincy	Toronto, Ont	April 18, '48	May 16, '85	O.L.S.
Seymour, Horace Llewellyn	Edmonton, Alta	June 11, '82	Feb. 22, '06	O.L.S.
Shaw, Charles Aeneas	Greenwood, B.C	Nov. 16, '53	May 10, '80	O.L.S., B.C.L.S.
Shepley, Joseph Drummond	N. Battleford, Sask	Sept. 13, '79	Mar. 12, '06	
Smith, Charles Campbell	Ottawa, Ont	Jan. 1, '73	Feb. 22, '06	O.L.S.
Smith, Donald Alpine	Claude, Ont	Sept. 22, '80	April 21, '10	
Smith, James Herbert	Edmonton, Alta	Nov. 9, '76	Feb. 23, '05	
Soars, Henry Martin Robinson	"	April 22, '77	Nov. 2, '08	
Speight, Thomas Bailey	Toronto, Ont	Feb. 8, '59	Nov. 16, '82	O.L.S.
Starkey, Samuel M	Codys, N.B	Sept. 4, '37	April 14, '72	
Steele, Ira John	Ottawa, Ont	April 6, '81	April 16, '08	
Stewart, Elihu	Collingwood, Ont	Nov. 17, '44	April 14, '72	O L.S.
Stewart, Lionel Douglas N	Collingwood, Ont		Jan. 27, '10	
Stewart, Will Malcolm	Saskatoon, Sask	Nov. 26, '84	June 6, '07	
Stewart, Louis Beaufort	Toronto, Ont	Jan. 27, '61	Nov. 22, '82	O.L.S., D.T.S. Professor of Surveying and Geodesy, University of Toronto.
Stewart, Alexander George	Ottawa	Aug. 16, '87	Mar. 14, '10	
Stewart, George Alexander			April 14, '72	O.L.S.
Stock, James Joseph	Ottawa, Ont	Aug. 16, '87	Mar. 2, '10	
Street, Paul Bishop	Toronto, Ont.	Dec. 3, '81	Mar. 29, '10	
Stuart, Alexander Graham	Buckingham, P.Q	July 16, '88	May 9, '11	
Summers, Gordon Foster	Haileybury, Ont		Oct. 20, '10	
Taggart, Charles Henry	Ottawa, Ont	'83	May 9, '11	
Talbot, Albert Charles	Calgary, Alta	April 5, '56	May 13, '80	
Taylor Alexander	Portage la Prairie, Man	Aug. 6, '75	June 9, '04	M.L.S.
Taylor, William Emerson	Owen Sound, Ont	Aug. 3, '81	Dec. 16, '10	
Teasdale, Charles Montgomery	Concord, Ont	Oct. 18, '79	Mar. 9, '06	
Thompson, William Thomas	Grenfell, Sask	Nov. 1, '53	Nov. 19, '77	D.T.S.
Tipper, George Adrian	Brantford, Ont	July 25, '86	May 18, '11	
Tracy, Thomas Henry	Vancouver, B.C	June 25, '48	April 14, '72	O.L.S., B.C.L.S.
Tremblay, Alfred Joseph	Les Eboulements, P.Q.		Feb. 18, '90	

APPENDIX No. 10.—*Concluded.*

LIST of Dominion Land Surveyors who have been supplied with Standard Measures—*Concluded.*

Name.	Address.	Date of birth.	Date of Appointment or of Commission.	Remarks.
Tremblay, Albert Jacques	Edmonton, Alta	July 25, '87	Mar. 1, '12	
Turnbull, Thomas	Winnipeg, Man	May 26, '57	Mar. 29, '82	O.L.S.
Tyrrell, James William	Hamilton, Ont	May 10, '63	Feb. 16, '87	O L.S.
Underwood, Joseph Edwin	Saskatoon, Sask	Nov. 3, '82	May 18, '11	
Vaughan, Josephus Wyatt	Vancouver, B.C	Oct. 17, '45	June 11, '78	B.C.L.S.
Vicars, John Richard Odlum	Kamloops, B.C.	April 16, '55	May 17, '86	O.L.S , B.C.L.S.
Waddell, William Henry	Edmonton, Alta	Mar. 23, '83	Mar. 25, '07	O.L.S.
Waldron, John	Moosejaw, Sask	Aug. 1, '72	April 2, '07	
Walker, Claude Melville	Guelph, Ont	Oct. 16, '84	Mar. 11, '11	
Wallace, James Nevin	Calgary, Alta	Aug. 21, '70	Feb. 20, '00	O.L.S.
Warren, James	Walkerton, Ont.	Nov. 7, '37	April 14, '72	
Watt, George Herbert	Ottawa, Ont	Feb. 5, '76	Feb. 24, '02	
Weekes, Abel Seneca	Edmonton, Alta	Feb. 17, '66	Feb. 11, '92	
Weekes, Melville Bell	Regina, Sask	Nov. 28, '74	Feb. 18, '03	O.L.S.
Wheeler, Arthur Oliver	Sidney, B.C	May 1, '60	Nov. 21, '82	O.L.S., B.C.L.S.
White-Fraser, George W. R. M	Ottawa, Ont	— — '61	Feb. 21, '88	D.T.S.
Wiggins, Thomas Henry	Saskatoon, Sask.	Aug. 24, '63	Feb. 18, '96	O.L.S.
Wilkins, Frederick W. B.	Norwood, Ont	June 27, '54	May 18, '81	O L.S., D.T.S.
Wilkinson, William Downing	Not known	......	Feb. 22, '93	
Williams, Guy Lorne	Enderby, B.C	Mar. 3, '79	June 24, '08	B.C.L.S.
Wilson, Reginald Palliser	Winnipeg, Man	July 9, '72	Jan. 26, '11	M.L S.
Woods, Joseph Edward	Pincher Creek, Alta	Oct. 13, '61	Nov. 14, '85	
Young, Walter Beatty	Winnipeg, Man	July 6, '80	Mar. 25, '05	M.L.S.
Young, William Howard	Lethbridge, Alta	June 8, '78	May 17, '07	

PART V

DOMINION PARKS

DOMINION PARKS

REPORT OF THE COMMISSIONER OF DOMINION PARKS.

Department of the Interior,
Dominion Parks Branch,
Ottawa, July 4, 1912.

W. W. Cory, Esq., C.M.G.,
Deputy Minister of the Interior,
Ottawa.

Sir,—I beg to submit a report for the fiscal year 1911-12, with respect to Dominion Parks.

During the year a change was made in the matter of parks administration. Prior thereto there was no distinctive parks administration. In addition to his many other duties the Superintendent of Forestry had to supervise the management of all parks matters. A recognition of the potentialities in connection with National Parks and the essential differences in the administrative requirements concerning National Parks and National Forest Reserves led to the detachment of the parks from the Forestry Branch and to the organization of a separate branch charged with the administration of parks alone.

It is interesting to note that the United States is following Canada's example in the matter of specializing in regard to National Parks administration. An agitation for the establishment of a Parks Bureau, at Washington, culminated in the following message to Congress from President Taft, on February 2, 1912:—

> 'I earnestly recommend the establishment of a Bureau of National Parks. Such legislation is essential to the proper management of those wondrous manifestations of nature, so startling and so beautiful that everyone recognizes the obligations of the Government to preserve them for the edification and recreation of the people. Every consideration of patriotism and the love of beauty and of nature and of art require us to expend money enough to bring all these natural wonders within easy reach of our people. The first step in that direction is the establishment of a bureau which shall take upon itself the burden of supervising the parks and of making recommendations as to the best method of improving their accessibility and usefulness.'

The re-organization of Dominion Parks administration followed the enactment in May, 1911, of the Dominion Forest Reserves and Parks Act. This Act repealed previous parks legislation and provided that the Governor General in Council might set aside suitable areas to be maintained and made use of 'as public parks and pleasure grounds for the benefit, advantage and enjoyment of the people of Canada.'

CHANGED AREAS.

When the parks were re-arranged under the new Act some changes were made in the boundaries. The areas now administered by the Parks Branch are:—

Park.	Area.	Former Area.
	Sq. Miles.	Sq. Miles.
Rocky Mountain	1,800	4,500
Yoho	560	828
Glacier	468	576
Jasper	1,000	5,000
Waterton Lake	13·5	54
Buffalo	162	162
Elk Island	16	16

It is understood that the principle on which the reductions were made was that the parks should not be of any larger area than the Department was in a position to reasonably improve and make available for the public. Since the change protests have been received against the reduction and the question is now under consideration as to whether the old areas should be restored or extensions of some kind made in the boundaries. The first protests arose in August when announcements were made in the newspapers that large numbers of white and Indian hunters proposed to take advantage of the removal of parks supervision from important game-breeding grounds to go into these areas and slaughter game by the wholesale. The branch took prompt action to prevent the proposed slaughter, however, with results that were eminently satisfactory.

PARKS ORGANIZATION.

The parks organization now is as follows:—

Head Office Branch at Ottawa in charge of an officer called the Commissioner of Dominion Parks.

Outside service.—A Chief Superintendent, located at Edmonton, charged with the supervision of all the parks' outside officers; and a separate organization in each park under a superintendent charged with the management of all matters concerning the park under his charge.

The re-organization involved the changing of the title of Mr. Howard Douglas from Commissioner to that of Chief Superintendent. The change in no way altered the duties performed by him, the new title being given because it was considered it more accurately described the duties of the office, viz.: the supervision of the work of the individual park superintendents.

ADVANTAGE OF NATIONAL PARKS.

In the words of the Parks Act the parks are 'for the benefit, advantage and enjoyment of the people of Canada.' To provide for a maximum development on these lines is the object towards which the parks organization is working.

The people of Canada primarily secure 'benefit, advantage and enjoyment' from their national parks, through the unequalled means of recreation that they provide. National parks are to the nation what local parks and playgrounds are to a city. Everything that a city park can do as a quick aid to the people, the national parks can do more thoroughly and on a larger scale. National parks are the natural result of a recognition that man requires the pure, wholesome, healthful recreation of the great out-of-doors. They provide for such on a scale commensurate with the needs of the people of Canada—present and future.

COMMERCIAL SIDE.

There is another way in which national parks prove advantageous to the people of Canada. They attract an enormous tourist traffic and tourist traffic is one of the largest and most satisfactory means of revenue a nation can have. The tourist leaves large sums of money in the country he visits, but takes away with him in return for it nothing that makes the nation poorer. He goes away with probably improved health, certainly with a recollection of enjoyment of unequalled wonders of mountain, forest, stream and sky, of vitalizing ozone and stimulating companionship with nature but of the natural wealth of the country he takes nothing.

The commercial potentialities of tourist traffic are almost startling. In 1907, an article, 'The Toll of the Tourist,' was published in the *American Review of Reviews.* This article gave the annual income of France from tourists as $500,000,000, the tourist toll of Italy as $100,000,000. It placed the expenditure of American tourists in England as $25,000,000. During the past five years there has been a constantly increasing tourist traffic, so the above figures are probably much lower than the amounts now spent. Other figures which have been secured indicate that Switzerland's annual revenue from tourists last year was $150,000,000.

In the United States it is well established that Florida gets a larger revenue from her tourists than from all the products of her soil. Hundreds of thousands annually visit Niagara Falls. Tourists spend six or seven million dollars each year in the Adirondacks and at least $5,000,000 annually in the pine woods of Maine.

The President of the American Civic Federation in a speech in September last calculated that American tourists spent abroad in 1910 the enormous sum of $350,000,000. On every hand there is evidence of a powerful and prevailing desire on the part of the people to see and commune with the beauties of nature, their willingness to pay for it and the pecuniary benefit of the locality concerned. Extraordinary scenery is one of the greatest assets a country can have. Canada has twenty Switzerlands in one. Maine's Adirondacks cannot be compared to Canada's national parks. There is now a powerful movement in the United States to 'See America First.' With the natural advantages Canada possesses in her national parks there appears to be no reason why she should not get a good share of the hundreds of millions of dollars that tourists annually spend.

The Parks Branch has to develop the national parks with the object of making their wonders and beauties available and accessible for the people of Canada. Every facility provided in that connection naturally is of equal value to the foreign tourist. Therefore the more the Branch can do in the parks to serve the recreation requirements of Canadians, the more it does at the same time to attract to Canada a share of the hundreds of millions that the public annually spends on recreation.

PARKS POLICY.

The policy upon which the Branch is carrying on its development work is based on the belief that the majority of the people, Canadians or others, who visit the parks are used to some degree of comfort and that no matter how fond they may be of nature they will not take a park tour unless assured of some degree of comfort, convenience and safety. Americans and Canadians in thousands go to the Alps because they believe they can see them in comfort and yet they have never seen the much greater attractions of the Rockies.

To meet these conditions the Parks Branch policy necessarily relates to the quality of the service of whatever kind, rendered by those dealing with the tourist: character of accommodation; avoidance of congestion; protection against extortion; provision of minor attractions to fill in between the nature trips; the construction and maintenance of roads and trails of first-class character in order that the various attractions may be comfortably and safely reached; special care in the matter of the dust nuisance and the rough road nuisance; supervision over sanitary conditions; water supply, horses and vehicles, guides, drivers, charges and rates; furnishing of full and reliable information; and, generally, in not only reducing discomforts to a minimum but in so administering matters that the tourist shall be as satisfied with the treatment received while in the parks as he inevitably must be with the science wonders he has viewed. The efforts of the Branch are being directed towards an organization dealing effectively with respect to details concerning all these various matters.

DEVELOPMENT WORK.

Development work in the parks relates chiefly to roads, trails, streets, sewers, water works and bridges. On this account engineering supervision has been provided. There is an engineer on the Head Office staff and also an engineer in the field. The plan adopted in this connection, in relation to road construction, is that the engineer on the ground shall by careful survey work locate the route with a view to getting the best scenic results, safety, permanency and ease of maintenance. He must go fully into the matter of grade, drainage, curves, foundations and materials. He also has carefully to estimate costs. He reports to head office, where his details are examined by another engineer. Repairs of any extensive character are dealt with in the same way. In this matter of roads it is hoped in this way to make them all permanent, smooth, dustless, mudless, safe and altogether attractive.

The general policy regarding other construction matters is similar to that in relation to roads.

WORK OF 1912-13.

For the year 1912-13 it is proposed to confine attention in the matter of roads and trails almost exclusively to perfecting as far as possible those already constructed. Very little new work is contemplated. In the matter of new work it is felt that best results can be obtained by working out a comprehensive plan of development covering each park in its entirety and then progressively carrying out such plan; each unit of work eventually forming a link in a comprehensive whole.

With a view to securing roads of the best possible character the department has purchased an eight-ton steam roller, a rock crusher, and a concrete mixer. Moreover, a reservation of tar-sand (asphalt) area in the Fort McMurray country has been made for parks purposes. It is expected a railway will be completed to Fort McMurray within two or three years and that the department will then be able to asphalt its park roads at a comparatively small cost.

CONSERVATION WORK.

Of equal importance with construction and development work in the parks is the work of conservation. This applies to the natural beauties and scenic wonders, to the forests, animal, fish and bird life. This work is carried on by a staff of game wardens who patrol the parks from end to end. Fire is, of course, the most serious menace. Very good results have been obtained from the system of fire patrol and protection in operation for several years. However, the practice of the branch is to keep in touch with the forestry branch experts for advice and suggestion and also to co-operate with the forestry officials with a view to getting the best possible results. Plans in regard to fire protection are being developed not only on the lines of patrolling, but also in the matter of a comprehensive trail system, telephone lines, signal stations, depots with stores for emergencies, organization of men, pack horses and equipment available at all times for emergencies; construction of fire guards; disposal and removal of dead timber.

FINANCIAL ADMINISTRATION.

Careful attention has been given to organization in regard to the financial end of the work. The object has been to provide a system whereby a maximum of value and results is secured with respect to every expenditure made; and whereby revenue potentialities are developed with a view to eventually making the parks self-sustaining.

In the matter of expenditure the system developed controls first with regard to the initiation of work and then provides by a variety of inspections and reports from different officers a close check upon the work, enabling head office when approving of the accounts for payment to calculate whether the amount of work done represents an adequate result for the money concerned. In the matter of the purchase of ordinary supplies the system adopted provides that no accounts can be paid unless accompanied by a requisition bearing the signature of the foreman or other employe requiring the supplies, the approval of the superintendent of the park and the receipt of the person to whom delivery was made. A store organization has also been provided for under which, by means of requisitions and receipts, individual responsibility is established with respect to every tool, implement or other article owned by the department. Finally all accounts of whatever nature are audited first in the chief superintendent's office and again by the accountant of the branch.

REVENUE.

The revenue collected in the various parks in 1911-12 was as follows:—

Collected by Parks Branch	$27,701 38
" Mining Lands Branch	58,561 67
" Timber and Grazing Branch	7,434 94
	$93,697 99

In some cases these dues are on berths partly within the parks and partly outside. There is no way by which the part actually collected within the parks can be fixed.

A new source of revenue was a royalty on ice cut within the park during the past winter. The rate was two cents per ton and the revenue totalled $430.62.

A vigorous policy of collection of arrears of lot rentals in the parks was inaugurated last fall. As a result nearly $900 arrears have been collected out of a total of $1,075 dealt with. In addition, seven cases of arrears had to be submitted to the Department of Justice, totalling $407. That department has secured the cancellation of the leases concerned and is now suing for the recovery of the money.

Careful investigation is being carried on with regard to sewer, water and other rates to ascertain that all the revenue due the department is collected. Moreover, it is expected a substantial revenue may be secured by the disposal of old buffalo in the herd at the park at Wainwright. Natural conditions require that a certain number of old buffalo bulls should be disposed of each year. As soon as a buffalo bull becomes aged and somewhat enfeebled the younger bulls drive him out of the herd and eventually kill him. When they do kill him they so lacerate the remains that head, robe and hide are destroyed. A prime bull will yield in the way of revenue approximately:

Head (mounted at cost of $150)	$500 to $800.
Robe	100
Meat	50 to 100.

There are a large number of aged bulls in the government herd and a substantial revenue should therefore be derived therefrom. Attention is also being given to the question of revenue from wild fur-bearing animals within the parks. Ontario now derives a large revenue from its wild animals in Algonquin Park and it is felt that a similar result may be obtained in the Dominion parks.

Taking the parks as a whole there is every reason to look forward to a return in direct revenue equivalent to a good rate of interest on the capital spent upon the parks; and, indeed, the capital expenditure may eventually be found to be equalled by the direct revenue.

The details of the work accomplished during the year are dealt with in the reports of the Chief Superintendent and of the Superintendents of the various parks which follow. There are a number of matters of general interest which, however, call for special attention.

SCHOOL LANDS IN PARKS.

During the year the question arose as to whether the school lands provisions of the Dominion Lands Act applied to the parks. The matter was submitted to the Department of Justice and an opinion received from it that the provisions in question do not apply.

FIDDLE CREEK DRIVE.

A contour survey of the district between Athabaska river and Fiddle Creek hot springs, Jasper park, was commenced last summer and will be completed during 1912. This is being made with a view to securing the best possible location for a carriage road to the hot springs. The country is a most rugged and difficult one and it is expected that when the road is completed it will provide one of the most spectacular scenic drives on the continent.

AUTOMOBILE ROAD.

Work was commenced in the early spring on a bridge across the Bow river, Rocky Mountains Park, at Castle and on a roadway from that point to the British Columbia boundary in Vermilion Pass. This road is a link in an automobile road scheme in which the Canadian Pacific Railway, the Government of British Columbia and the Dominion Government are jointly interested. The scheme involves the completion of an automobile road from Calgary to Vancouver. The Dominion is building that portion of the roads through the parks and the railway company and the province are responsible for the balance. The Dominion has already built sufficient roadway to enable automobiles to travel from Calgary to Banff, and several miles beyond. Work is to be proceeded with during 1912 from the present terminus to Castle. This will connect with the other portion of parks road from Castle to Vermilion and there join the British Columbia-Canadian Pacific Railway portion of the road. From the Vermilion Pass the road is located via the Windermere lakes to Wardner, on the Crowsnest line. From this point the road, by linking up with existing roads, will reach Vancouver. Going eastward it will proceed via the Crowsnest to Lethbridge. Thus in a short time, not only will it be possible to go to Calgary and other points east to Vancouver by auto but there will also be provided a round trip—Calgary to Banff, to Castle, to Vermilion, to Wardner, to Lethbridge, to Calgary—of 500 miles during which the autoist will at all times be either in the Rockies or in full sight of them.

POWER DEVELOPMENT.

During the year permission was given the Calgary Power Company to build a conservation dam at the outlet of Lake Minnewanka, Rocky Mountains Park. Elaborate provisions were incorporated in the agreement adequately to protect parks interests. One provision required the removal close to the ground and the destruction of all timber along the lake within the area to be flooded and for a distance of 10 feet above thereof. The consequence has been the removal of large quantities of dead timber which constituted an eyesore and the substitution of trim, clean cut shores. However, perhaps the most important feature of the arrangement was a provision that the company must make provision in the dam by which the department may carry out a power development of its own. An abundance of electric lighting for Banff, especially during the tourist season, is of the utmost importance, and advantage was taken of the conservation scheme to provide for a development which will give the Department 800 to 1,000 horse-power.

NEW BATH HOUSE.

One of the outstanding attractions at Banff is the Hot Springs. The present facilities for bathing both at the Upper Hot Springs and at the Cave and Basin have become quite inadequate. The revenue from the Springs last year was $4,808.75 and it would have been much larger had the Department been able to accommodate all who wished to use the baths. During the summer Mr. A. Van Damme, the foremost bath house architect in the United States, was authorized to prepare plans for two new bath houses. Mr. Van Damme spent some time at Banff and in September submitted preliminary plans. It was too late in the year to proceed with any building operations but an appropriation has been made for 1912-13 for bath house construction and it is expected that while the plans before the Department may be too elaborate for present purposes, at least one new bath house will be built during the fiscal year.

At Buffalo Park, Wainwright, the Department has purchased an equipment of horses and implements with a view to doing its own work in the matter of ploughing fire guards and providing hay for the buffalo. The cost of this work during 1911-12 was about $3,000 and higher in other years. The cost of the outfit necessary to undertake it ourselves was approximately $5,000. In the past great difficulty was always experienced in hiring teams and otherwise arranging for this important work. All this trouble will now be obviated and it is calculated that in a few years the Department will have saved the cost of the equipment purchased.

I have the honour to be, sir,
Your obedient servant,
J. B. HARKIN,
Commissioner of Dominion Parks.

No. 1.

REPORT OF THE CHIEF SUPERINTENDENT OF DOMINION PARKS.

EDMONTON, ALBERTA, April 1, 1912.
The Commissioner of Dominion Parks,
Ottawa, Ont.

SIR,—I have the honour to submit herewith my fourth annual report as Chief Superintendent of Dominion Parks for the fiscal year ending March 31, 1912.

As you will observe by the report the predictions made by me, a few years ago, in regard to the Mountain Parks have been more than realized and their development has already exceeded the most sanguine expectations.

It is with sincere pleasure that I am able to report that judging from past development, and present indications, it is a difficult matter to estimate the limit of the usefulness of these Mountain Parks as unique pleasure and health resorts, not only for the Dominion, but for visitors and tourists from almost every part of the world.

For convenience I have arranged this report under the following heads:—

1. Report of Chief Superintendent of Dominion Parks.
2. Report of Superintendent of Rocky Mountains Park.
2. (*a*). Report of the Curator of Banff Museum.
2. (*b*) Analysis of Nationalities of visitors to the hotels.
2. (*c*) Report of the Alpine Club.
2. (*d*) Statistical Summary *re* roads, trails, improvements, &c.
3. Report of the Superintendent of Yoho and Glacier Parks.
4. Report of Superintendent of Buffalo Park.
5. Report of Superintendent of Elk Island Park.
6. Report of Superintendent of Waterton Lake Park.

As Jasper Park was administered through this office during the past fiscal year the details of the work done there will be found in my own report.

In presenting my report for the year ending March 31, 1912, I have attached reports from the superintendents of the different parks in control of this branch of the Department of the Interior. These reports give in detail an account of the work carried on in, and the operation of parks under their charge.

ROCKY MOUNTAINS PARK.

The increase of popularity of this now famous resort may be judged by the comparison of the number of people who have visited the park each year for the last ten years.

Year.	No. of Visitors.
1902	8,516
1903	10,696
1904	11,752
1905	17,605
1906	30,136

Year.	No. of Visitors.
1907 (9 months)	28,735
1908	32,209
1909	39,780
1910	56,462
1911	63,494
1912	73,725

This steady increase in travel has resulted in an equal increase in trade for all classes of business, as well as a corresponding increase in revenue in the park.

It will be noticed from the report of the Superintendent of Rocky Mountains Park at Banff that the revenue of the park, from all sources, with the exception of the royalty on coal, shows a very steady and satisfactory increase. This was due to the coal strike in Southern Alberta, which lasted for over nine months. Even with this loss to revenue, it will be noted that the revenue from this park almost equals the total appropriations made for maintenance.

I would suggest that a capital account be established as soon as possible. If this were done it would be found that the revenue, exclusive of the amount paid for permanent structures, such as roads, bridges and buildings, would be almost double the amount required for salaries, repairs and maintenance.

One thing which prevents an even better showing regarding finances is the fact that at one time a difficulty was experienced in obtaining labourers, due to private interests in the district, which necessitated an increase in the wages usually paid. However, the work which has been performed has been very satisfactory, and I think the expenditure of the few extra dollars has worked out to a good end.

In the matter of fire protection for the forests and game, excellent results have been obtained from the fire laws governing that phase of the work of conservation, and residents in the forest reserves are taking as keen an interest in protection as are those paid to look after the work. There is no doubt that the staff of fire guardians is the most important we have. To them is attached a great responsibility in furthering the ends of the Government of the Dominion to maintain and perpetuate the beauties of mother nature, which were given us with a bountiful hand.

As the years roll around one connected with park management becomes more and more convinced in favour of good organization in forest work. Since my last report was issued the western newspapers, and a few eastern ones have sent their representatives through several of the parks, and through their efforts the importance of such work is being told the people, comparatively few of whom were previously aware of its great possibilities.

The majority of forest fires throughout the mountains are caused by sparks from engines, which fires I am certain will be greatly diminished by the new legislation which requires that all engines be equipped with screens over their exhausts. I also notice that starting July 1, this year all engines between Field and Vancouver will burn oil as a fuel. This will add another great asset to our forest and game preserves, and reduce the fire danger from that source to an absolute minimum. I cannot urge too strongly upon the Department the need of seeing that every railroad lives up to these new requirements in every particular.

GAME.

Two years ago, in my annual report, I mentioned the fact that parties travelling through the Rocky Mountains Park were able occasionally to see Rocky Mountain goats near their line of travel. I am pleased to report this year that, owing to our system of game protection, this class of animal is constantly becoming more tame, and along the Banff-Laggan road one can see a flock of more than twenty-five feeding along the road any day. Indeed, so tame are they becoming that those to whom they are accustomed are able to approach them almost as closely as a farmer can to his ordinary sheep. As a matter of fact tourists have been able to make excellent photographs of the flock.

The game protection staff now consists of five permanent wardens, who patrol all portions of the park on regular trails with small cabins constructed at different points where they can remain over night, thus avoiding the necessity of packing tents with them. Each is furnished with a pony and saddle, besides a pack horse to carry supplies, so that they are able to remain out several days at a time, or as long as their patrol duty in any particular territory may require. By this means any killing of game by Indians or tourists that might have prevailed in previous years, which was by no means a rare occurrence, especially in outlying portions, has been entirely eliminated, so far as any of the wardens or superintendents have been able to ascertain.

In addition to this the regulation prohibiting the carrying of fire-arms in the different parks, unless they are sealed, has, I think, removed a great source of temptation, which was, perhaps, responsible for infractions of the game laws. I am firmly convinced that the sense of the wild animals in the parks has told them that they are protected, and to me my contention is proven by the fact that all game is now less timid of the approach of men and less fearful of natural enemies in the form of dogs and guns.

Coyotes, which have been so destructive to all small game, especially while they are having their young, besides being a menance to enclosed animals, have had their numbers very much lessened during the past year, forty-five having been destroyed in Banff alone, while almost an equal number were killed at Buffalo park. All game wardens have been equipped with rifles and ammunition, as well as field glasses, so that now they are in a much better position to destroy any carnivorous animals they may come across, such as wolves, lynx, mountain lions and coyotes. Little trouble has been met with on account of bears, and only occasionally have we been called upon to destroy an odd one which came into the city limits, thus frightening tourists from going into the hills.

A particularly pleasing paragraph of this report is the fact that we have been successful in capturing a mountain sheep (ewe). After the capture of two rams two years ago, I offered two reliable trappers in Banff, $50 if they would deliver an adult female mountain sheep at Banff. However, one of our own men while on duty, was fortunate enough with the help of other park men, to make the capture. At a point four miles from Banff there is a sulphur spring which is a favourite watering place for these animals. Here one of the foremen, W. H. Green, met a ewe in the middle of the road, and, after frightening it into some deep mud, jumped in himself and succeeded in throwing it on its back and tying it so that he could bring the animal to town.

At the end of March there were the following large animals in the enclosures at Banff: Buffalo, 25; moose, 8; elk, 17; mule deer, 8; white tail deer, 3; Persian sheep, 3; Angora goats, 9; Rocky Mountain sheep, 3; Rocky Mountain goat, 1; four horned sheep, 3; six legged sheep, 1.

FISH AND FISH HATCHERY.

Since my last report fishing in the park has attracted a greatly increased number of people to enjoy the sport. I must, however, draw your attention to the fact that the big catches which were common in former years are becoming almost unknown. The only conclusion to arrive at, more especially with regard to the more accessible lakes and streams, is that they are rapidly being fished out, and that it will be necessary in the near future, either to re-stock many of them, or to curtail, or even abolish the open season for some time.

In connection with the above, I would strongly recommend the establishment of a properly equipped fish hatchery at some of the many suitable locations to be found within the limits of the park. The fishery commissioners, when they were through here last year, stated that they would strongly recommend this hatchery, but as yet I have heard nothing further of it.

The cost of a building in connection with a moderate sized hatchery would not be very great, while the cost of maintenance is comparatively small, one or two men being all that would be required to oversee the work. In this way millions of small fish could be transplanted into the various streams, not only in the park, but in the provinces surrounding it. thus adding one more to the many attractions to be found.

ROADS AND BRIDGES.

It will, of course, be necessary during 1912 to give considerable attention to all the completed roads in the park, of which there are 96·5 miles, which you will find detailed in the superintendent's report. The Banff-Laggan coach road was further added to by the completion of about three miles. A cut was made through the green timber and the completion of the work will be made during the coming year, as an appropriation for that purpose has been given. The green timber which was cut was taken to the sawmill, and has supplied 35,000 feet of excellent bridge timber. Roads to the different points of interest about the town have been thoroughly repaired, while all town streets are in excellent condition.

The Lake Louise to Lake Moraine road has been completed after much laborious work through a rock cut. Owing to heavy traffic, however, it is extremely difficult to keep this road in condition, as ruts are cut in it, which fill up with water and eventually become much larger ruts. The total amount expended on this road during the year was $1,645.67.

As a matter of fact, all park roads have been built of material found in the immediate vicinity, which consists of gravel and clay. In the past this has answered very well for the wear given it by light conveyances. I notice, however, that during the past few years, when heavy tallyhos have been used, this material will not stand the heavy traffic. The main road from the Canadian Pacific railway station to the various hotels, owing to the large amount of construction work called for in enlarging the buildings, and the consequent amount of heavy teaming, has been almost totally destroyed. To meet this contingency it has been found necessary to arrange to construct solid macadam roads, and for this purpose a large rock crusher and steam roller have been ordered. It is expected they will be on hand in May, when a thorough system of macadam roads throughout the entire park will be built. The Canadian Pacific Railway Company is adding an extension to its hotel, spending about half a million dollars on the Banff Springs hotel and about $425,000 at Lake Louise, and the cement, iron and other materials were teamed over the roads in the early spring, destroying the crown which for years had withstood the light tourist traffic.

Outside the Banff-Windermere road, the main work this coming year will be wholly repairs, the intention being to work on all present roads until they are in a first-class condition, before starting on any of the proposed new ones.

During the past year about 100 miles of new trails were constructed in the Rocky Mountains Park, at a cost of slightly over $3,000. I would strongly recommend that this class of work be carried on upon a liberal scale. Trails serve a double purpose, not only making it possible for tourists to wander or ride as far as they like, but are of great assistance to the fire and game wardens in reaching remote places in the mountains, which have been hitherto practically inaccessible. A thorough network of these trails, which can be built at a cost of only about $30 a mile, would prove invaluable were a fire to break out, as the fire could then be attacked from all vital points and very easily extinguished.

TELEPHONES.

In connection with the telephone system at Banff, I would strongly recommend that an underground system of wiring be inaugurated as soon as possible, as with the growth of the town and its possibilities, overhead wiring is not adding to its attractiveness. In many cases beautiful shade trees have had to be cut down to make room for the wires. These cannot be replaced, but an underground system would save further destruction of Banff's beauty from this cause.

SULPHUR BATHS.

I am glad to note that a substantial grant has been made to build a new bath house, a matter that is gone into quite thoroughly in the report of the superintendent. I expect that work will be started in this connection very shortly.

You will note from the detailed statement of the number of guests and bathers at Banff, that there was an increase during 1911, of over 10,000 over the previous year.

Among important exploratory expeditions undertaken by the Alpine Club and its members were: (*a*) Jasper Park and Mount Robson topographical survey, under Director A. O. Wheeler, F.R.G.S., of which an elaborate report accompanied by a map is being prepared. This expedition was accompanied by a party of four naturalists from the Smithsonian Institute of Washington, in charge of Mr. Hollister, Assistant Curator of Mammals, U. S. National Museum. (*b*) Exploration in the mountains of Northern Alberta by Dr. Norman Collis, F.R.S., and A. L. Mumm. (*c*) The Mamquan mountains at the head of Howe Sound, by Vancouver members under the leadership of B. S. Darling. Other expeditions and climbs were made in different parts of the National parks. Mount Sir Sandford was again unsuccessfully essayed.

The Canadian Alpine Journal, containing reports of the previous year's work and much information on the mountain regions, was issued to members and circulated among the Alpine and Geographical Societies of the world.

YOHO AND GLACIER PARKS.

In Yoho and Glacier parks all roads and bridges were given a thorough overhauling, and trails were cleared of fallen trees. Additional rustic seats were placed along two of the drives, and the National Bridge and Emerald lakes drives were connected by a carriage road, thus making a return drive. Another great beauty spot was added to the attractions of the park by the building of a road from the Natural Bridge to a canyon a distance down the Kicking Horse river. The old grade of the C.P.R. which was abandoned upon the completion of the spiral tunnels, was used to make a carriage road of three and one-half miles from Field. The bridges along the road were covered with three-inch plank and railed on each side. The superintendent urges in his report that this road be extended and that an appropriation be made for the purpose. In this regard I entirely concur with him.

Regarding the protection of game in this park, I hope that some arrangement can soon be made with the Provincial Government of British Columbia to assist in the propagation of the many species to be found in the reserve.

In connection with the drive in Glacier Park, from Glacier to the Nakimu Caves, which we were unable to finish last year, I am glad to notice that an appropriation has been made for its continuance, and I trust the road will be finished before the fall of 1912. Work will also be started the coming year on the road to Stephen, the eastern boundary of the park, for which an appropriation has been made. When completed I am convinced it will make one of the most beautiful drives in America.

The usual work of repairs will be carried on this year, and a steel structure bridge will be built across the Kicking Horse at Field, the appropriation for which has been made. The balance of the work consists of extensive repairs to the present roads and fire and game protection.

BUFFALO PARK.

The report of the Superintendent of Buffalo Park is very encouraging, and he makes several suggestions which I think it would be wise to follow. The rainy season in the neighbourhood during the summer and fall of 1911 retarded the progress considerably, but if the new suggestion that three hundred acres be put in oats is adopted, all danger from a shortage of food will be removed. The matter of fire guards about this park is a very important one, and it will be well to see that the utmost precaution is taken against this danger of fire.

Acting under the Department's instructions an outfit of horses and equipment has been purchased and a large block of land broken and seeded.

The increase of the herd of buffalo of 172 head during the year is very gratifying. Regarding the matter of old bulls dying during the winter or being killed by younger ones, I would strongly advise that the superintendent's recommendation that a number of these be killed in the fall when their hides are good be approved by the department and the necessary order issued to carry out the recommendation. December is the proper month for this killing. The robe is valued at more than $100 and the head about $500. The meat could be sold for a good price during the Christmas season. As it is now the buffalo die or are killed on the prairie, and are a total loss by the time they are found.

It will be noted that there has been a favourable increase of all animals with the exception of antelopes. They have made no increase whatever, and we are unable to explain the reason. The census at the end of the year showed: Buffalo, 994; moose, 11; elk, 18; deer, 50; antelope, 14.

The equipment at this park now is very complete in every respect, and no further expenditure for improvements will need to be made for several years to come, outside of ordinary maintenance, such as fire guards and hay for the buffalo. A very conservative estimate of the buffalo calf crop for this year would be 200; it will probably be nearer 250. During the year eight head were shipped in from Montana by M. Pablo, and it was fully hoped that Mr. Pablo would have been able to clear the range and ship the balance of the buffalo contracted for, but after repeated efforts during the winter, he was forced to abandon the chase, as the animals were scattered over such a wide expanse of country that they could not be collected. He managed to corral seven head in the mountains in the month of March, and it is expected these will be shipped in a very short time. Mr. Pablo has written asking the government to give him one more chance to clear the range after the snowfall in the autumn, when he will be able to track them, and if the department will grant his request I have no doubt he will be able to make a complete clean-up, as it is his intention to kill any outlaw that he is not able to corral. I may say that, although he was not able to deliver many buffalo during the year it was through no fault of his, as I am well informed he did everything in his power to corral the entire remnant of the herd during December and January.

WATERTON LAKE PARK.

I quite agree with the report of the Superintendent of Waterton Lake Park, when he refers to the reduction of the area, as this cutting out of the lakes and also a portion of the land situated between this park and the United States Glacier Park changes the original intention, which was to have this park adjoin the one on the other side of the border and make one huge game preserve. The cutting down of the area entirely cuts out the Waterton Lakes, which are nine miles long, six of which are in Canada. I would strongly urge that, at least, a portion of the mountain section lying between the two parks be restored, as well as the lakes.

About four miles of the road were constructed in the park during the year, and during the month of March a bridge was built over Pass Creek. One of the most dangerous streams in the original area of the park, the Waterton river, is badly in need of a ferry, as at present there is none for 40 miles. The superintendent of the park states that there have already been three fatalities on this river, while many horses have been lost. An appropriation was made for this ferry, but since this was done the river has been excluded from the park and we would not be justified in making the expenditure outside the reserve.

I would like to include in my report the last paragraph of Mr. Brown's report which I agree with in every particular:—

'In conclusion I might add that the enlargement of this park is greatly desired by the people of the district, and also by the sportsmen here and on the United States side. The Campfire Club of America is very anxious to co-operate with any action taken for the protection of our fast disappearing game. There is a vast area here that seems to be useless for any other purpose.'

ELK ISLAND PARK.

As will be seen from the report of the Superintendent of Elk Island Park, the animals under his charge have all increased favourably, no loss of any kind being reported, with the exception of one cow that became disabled and had to be shot. The increase in the buffalo was thirteen. Nine moose were shipped in from Banff, and three which were captured in the vicinity of Lesser Slave Lake were added to the herd. The estimated number of elk at present is thirty-five, and deer about forty-five.

JASPER PARK.

At the commencement of the fiscal year, April, 1911, Mr. J. W. McLaggan, who had been acting as chief forest ranger and acting superintendent of this park for the previous year, severed his connection with the Parks Branch of the Department of the Interior, and this park has since been under my personal supervision. At that time the end of steel on the Grand Trunk Pacific was at Prairie Creek, 183 miles west of Edmonton, and three miles from the eastern boundary of the park. During the months of May and June the steel reached the crossing of the Athabaska river, about twenty-four miles from Parkgate, and in the month of August was completed to Fitzhugh. There are now about 64 miles of the main line in the park on which trains are running regularly.

At Fitzhugh a twelve-stall roundhouse has been erected, as well as a commodious station with dining hall attached. The work of laying out extensive yards is now well under construction. Up to the present no survey for a townsite has been made, but we are daily expecting an engineering party through there to do this work. An efficient water service has been built through the proposed townsite to the station. This water is brought from a dam on a stream known as Cabin creek, and has a total fall of 102 feet. The water is of the finest quality, and a sufficient supply for some years is assured.

One could scarcely choose a more beautiful spot for the townsite than the one decided on. It is comparatively level over its whole area of two miles long and one mile wide and is quite heavily wooded. The famous old Yellowhead trail runs through it, and is still used as a pathway from the station to the engineers' camps, which are located on the most beautiful spot on the whole townsite.

Fitzhugh is the first passenger divisional point west of Edmonton, and will no doubt be the most important town, from a railway point of view at least, of any in the mountains east of the British Columbia boundary. As far as Fitzhugh the road follows the Athabaska river, but there it leaves the valley and turns northwesterly up the Miette river. The valley of the Athabaska river, from one and one-half to three miles broad, forms one of the many contrasts noticed in comparing the route of the Grand Trunk Pacific with that of the Canadian Pacific through the Kicking Horse. Its breadth gives the traveller a much better view of the mountains than could otherwise be obtained. The Miette river itself is a much smaller stream than the Athabaska, but has all the turbulency usual in mountain streams.

Pocahontas station, where the Jasper Park Collieries are located, will become a more important district each year. A large amount of development work has already been done here by the Jasper Collieries, Limited, and the average daily output of the mine is now 350 tons, although the mark of 500 tons has been reached. The company has its own townsite on a level a couple of hundred feet above the station, and immediately under the Roche Miette, one of the grandest peaks in the park. This peak has 8,100 feet to its credit above the sea level and is 2,900 feet above the coal mines.

Jasper Park Collieries, Limited, have proved a large quantity of coal in the four claims that have been opened up and many more outcroppings have been discovered on both sides of the Athabaska river, which passes through the property. The seam that is now being worked is a ten foot one, which in places opens out to fourteen feet. The original prospecting was done to find this coal two years ago but actual operations were not commenced until last September. Since that time 45,000 tons of coal have been loaded on cars and consumed on the Grand Trunk Pacific. There are 150 men working now, but this force will be materially increased in the spring, when $100,000 worth of new equipment will be put in, all electrically driven. Already thirty frame houses have been erected by the company on its townsite, and ten more are in course of erection. These will be rented to employes for from $10 to $12 a month, according to size.

The Canadian Northern Railway enters the park on the west side of the Athabaska river, and the right-of-way follows the river. It is fully expected that the steel will be laid through the park to the summit by the end of the summer of 1912.

Fourteen miles to the east are to be found hot springs with a higher temperature and a bigger flow than those at Banff. The water will probably be piped down from its source to the site of the Grand Trunk Pacific Hotel, which is to be built on a hill overlooking Fiddle Creek Canyon, four miles away from the colliery. The canyon is about 200 feet high, and during the time of the spring freshets carries an enormous volume of water. The hotel will cost about half a million dollars, and will be built in such a manner that it can easily be extended.

A trail has already been constructed from the colliery to the hot springs, a distance of about fourteen miles, and surveyors are now engaged in locating a carriage drive to the hot springs, which, when completed, will be one of the best scenic roads in any of our parks.

About thirty miles west of Fiddle Creek a bridle trail has been cut to Maligne Lake, which lies some thirty-five miles south of the railway. This lake is acquiring world wide fame as a beauty spot. Its waters are wonderfully clear and cold, and in many places sheer walls of rock, thousands of feet in height, rise from the very shores of the lake. In many of the lakes, of which there are great numbers scattered throughout the park, trout are found and caught in large numbers. During last year a great many well known scientific men visited this park and were very enthusiastic in their praise of its beauty. Indeed, several of them declared there was nothing to rival it in beauty in America. Mr. Proctor, the famous sculptor and water-colour artist, spent six weeks in the vicinity of Maligne Lake, and exclaimed enthusiastically on his return: 'It is just as God turned it over.'

The principal work done during the year was the building of the two trails previously mentioned, and in fire and game protection. Until the present railway construction is completed through the park, no very extended system of road making can be undertaken. The principal work for the coming year should be on a carriage drive to the hot springs, so as to make it possible for tourists and others to get to this point. We will also guard very carefully to protect the game from poachers, and the forests from fires. The large number of men employed on construction in blasting and burning makes it imperative that we keep up a careful and continuous patrol.

In conclusion I desire to express my appreciation of the support which I have at all times received from the Department in furthering the development of the Canadian National Parks, and also of the liberality of the grants made by Parliament for this work. I have endeavoured to the utmost of my ability, to expend the money entrusted to me as economically and judiciously as possible so as to ensure the best and most lasting results. The constantly increasing popularity of the parks, and the prospects of large additional revenues which are to be derived from different sources would undoubtedly seem to justify the still larger expenditure necessary to keep pace with growing requirements.

I have the honour to be, sir,
Your obedient servant,

HOWARD DOUGLAS,

Chief Superintendent Dominion Parks.

No. 2.

REPORT OF THE SUPERINTENDENT OF ROCKY MOUNTAINS PARK.

BANFF, ALBERTA, April 1, 1912.

The Chief Superintendent of
Dominion Parks,
Edmonton, Alta.

SIR,—I have the honour to submit my second annual report as Superintendent of the Rocky Mountains Park for the fiscal year ending March 31, 1912, and in its preparation I have endeavoured to include and confine the review to such particulars as would interest my superiors in the management and administration of the property and public interests entrusted to my care.

The general work of park maintenance and all new construction work progressed during the whole season without any serious interruptions with the possible exception that I experienced some difficulty at one time in securing labourers. I have inspected all the work performed and it is very gratifying to be able to report all new work and repairs as having been completed in a manner above criticism.

All sources of revenue have increased considerably over the total realized for the fiscal year ending March 31, 1911, except the Mining Lands Branch. Rentals for coal lands have just about equalled last year's, but the royalty is so small as to be scarcely worth mentioning. This shortage is due to the Alberta coal strike, which went into effect on the 1st of April last. All mines were closed from the 1st of April to about the 15th of December, and even at this time they are not working at full capacity.

FIRE AND GAME PROTECTION.

The system, perfected (as nearly so as our staff of game guardians would permit) for the protection of game within the park has been productive of the most satisfactory results. Those consigned to this class of work have been constantly on the alert to prevent any unlawful destruction of game and they report that in no instance has any evidence of such violation of the park regulations been discovered. Rocky Mountains sheep are becoming less timid each year, and during the construction of the Banff to Laggan road, a flock of over twenty-five of these animals could be seen feeding above the road at almost any hour of the day.

Bears have given us very little trouble this year as we were called upon to destroy but one, in the neighbourhood of the Hot Springs.

Our permanent and temporary game guardians have destroyed forty-five coyotes, which record exceeds that of last season by fifteen animals.

The fire and game guardians employed have shown good judgment in the performance of their duties and the interest in their work has been particularly noticeable by the initiative manifested in their effort to keep all hunting parties under their observation and in preventing violation of the regulations. It is my opinion that the example made of the hunters caught killing game in the park in 1910, has had an excellent moral effect upon those who had been successfully poaching during previous seasons.

I also had a man stationed at the Spray lakes who patrolled the neighbourhood regularly and prevented the dynamiting and catching of fish by unlawful methods. From this point we also travelled once a week to Mount Assiniboine.

A man was also located at the new cabin on the Kananaskis and two others were continually scouring the country north of the Canadian Pacific railway track from the Panther creek cabin to the Clearwater and Big Red Deer rivers.

In addition to the men distributed to the foregoing points, I had three men make daily trips on railway velocipedes to extinguish any fires that might have been caused by locomotive sparks, and one other who was on duty at Banff and kept himself posted with regard to all tourists and hunting parties outfitting and leaving from Banff.

The results have been most satisfactory. One man was convicted of catching fish and game unlawfully and fined, and another was found with a shot gun in his possession (unsealed) which was confiscated and the owner fined.

One small fire occurred about four miles west of Banff near Mount Edith Pass, but did no damage and the only other fire occurred in the neighbourhood of Duthill, about five miles east of Banff. Neither of them was serious and they were at no time beyond control.

It is my opinion that the system inaugurated this year for the protection of fire and game will be an excellent one to follow in the future. With the small staff of seven men and with so large an area to be covered the patrol is not comprehensive enough, but as this was the first year of its trial, I think the results attained by even the few employed in the work should conclusively prove the merit of this system, and warrant the employment of a larger force in order that it may be brought to a state of perfection.

ROADS, BRIDGES AND FENCING.

The completed roads within the park all required more or less attention during the season, and before going into details the following list of roads now constructed in the park may be of interest as reference:—

	Miles.
Kananaskis to Banff	35
Banff to Hot Springs	3
Banff to Sundance Canyon	4
Banff to lumber camp on Spray river	8
Tunnel Mountain drive	5
Lake Minnewanka drive	9
Banff to Laggan coach road	5
Laggan to Lake Louise	3
Lake Louise to Moraine Lake	9
Bankhead road to Buffalo paddock	1
Town streets	6
Loop drive	7
Canmore station to Mines	1.5
Total	96.5

Three miles of the Banff to Laggan coach road were constructed, completing an excellent drive for a distance of about five miles from the railway station, with the exception of a stretch from the track to Stoney Squaw Mountain. I had a wide cut made through the green timber from the road crossing the railway (near the steel Canadian Pacific railway bridge) across block 'C' and the completion of this work will be the first undertaken next season. This new cut necessitated the erection of a new wooden bridge over Forty-Mile Creek. This structure was finished last winter and does away with the old, unsafe bridge which was built further up the creek a number of years ago.

In cutting out this new stretch of road from the track to the mountain, we accumulated a large quantity of green timber and our local saw mill being in the same vicinity I had it sawn into boards and dimension timber. This has supplied us with over 35,000 feet of economical building and bridge timber of the very best quality and will be of great value to us in constructing the new bridges on the Banff to Laggan road.

The Hot Springs, Sundance Canyon, Spray river, Lake Minnewanka, Laggan to Lake Louise, Lake Louise to Moraine Lake, Bankhead to Buffalo Paddock and Canmore station to Mines roads and all town streets were all thoroughly repaired. The Canmore station road is practically an entirely new one.

At the close of the 1910-1911 season there remained to be finished about one quarter of a mile of road from Lake Louise to Moraine Lake. There was a great deal of very hard and laborious rock work to cut through, and as it was necessary that this road should be completed as early in the spring as possible, I first started a small gang in May and increased the force in June. The road was first put in shape from the station to the Chalet, and then completed to the Lake and was in excellent condition before the tourist season at this point fully opened. It is a most difficult and discouraging undertaking to keep this road in first-class condition. The soil and available material are not fit for road building. It will not build up a good bottom, and the heavy loads continually passing over this thoroughfare cut through the crown, thus making ruts that fill with water which drains from the side-hill. This eventually forms a deep hole of mud, and results in a cut or washout across the road. Culverts would remedy this difficulty if these washouts occurred at the same point every year, but they are always happening in different places. Since the close of the Laggan tourist season the Canadian Pacific Railway Company have hauled seventeen cars of cement over the road from the station to the Chalet and such usage will test even a good road-bed to the utmost. The total amount expended at this point during the year was $1,645.67.

We built eight miles of new road (Banff to Calgary) and it was in fairly good shape during the summer. It has been used a great deal by Calgary autoists, over one hundred and fifty automobiles having made the trip from Calgary to Banff during July, August and September.

A small bridle bridge was built over the Spray river at a cost of $200. In finishing the cinder paths on Banff Avenue, we had to construct two rustic bridges to span wet places and depressions that it would cost too much to fill. Another bridge of this style was built on Buffalo Avenue, as well as one on Wolf Street.

Since the first of April last, we have built trails to the following points:—

	Miles.	Cost.
Sundance Canyon to Brewster Creek.	16	$ 350
Laggan to Bow summit.	30	1,300
Sawback Lakes to Bankhead	28	750
Spray Lakes to Mt. Assiniboine.	18	450
Simpson-Pipestone Trail.	6	200
Total mileage of new trails	98	$3,050

TOTAL MILEAGE OF TRAILS IN PARK.

	Miles.
Spray to Mt. Assiniboine	18
Banff to Spray Lakes	30
Bow summit	30
Banff to Brewster Creek	16
Simpson to Pipestone Trail	6
Cascade (Sawback to Bankhead)	28
Mt. Edith Trail	11
Lake Minnewanka Trail	14
Simpson Pass to Simpson Summit	14
Total distance	167

Every one of these trails has been inspected and our staff of fire and game guardians have been regularly travelling over them during the year, reporting them in excellent condition last fall.

SIDEWALKS, CINDER PATHS, ETC.

During the season there were 8,000 lineal feet of six-foot cinder paths completed, and they have proved a great convenience and greatly lessened danger to pedestrians.

TELEPHONE SYSTEM.

Most of our expenditure on this account was almost entirely confined to installation, maintenance and salaries. As the town increases in permanent residents, so do the number of new subscribers increase. The revenue realized is considerably more than that of last year.

One of the first improvements that impressed me should be made, when I took up my duties here, was the manner of the wiring. When phones were first installed in Banff wire-strung poles perhaps did not present an unsightly appearance; but as the number of subscribers increases so does the number of wires and poles, until at the present time some of the streets present the appearance of a business thoroughfare, instead of an exclusively residential street, which, strictly speaking, they all are. The extensions of the telephones demand poles, and on some of the most picturesque streets in the town it has been necessary to cut down large trees that were of great value for shade and ornament, to make room for these poles and wires.

In a town of this character and possibilities where improvements undertaken and capital invested by private interests amount to a large total, everything should be done to make it the most beautiful place in Canada.

My suggestion would be to have these poles removed and the wires run underground. There would be less chance of the 'phones getting out of order, the service would be improved, and the improvements to the appearance of the town would be very great.

STREETS.

The number of good available lots being so limited it became necessary during the past year to open up the street from Cariboo street to Cemetery, and to extend Muskrat, Beaver, Martin, Moose and Rabbit streets. This has provided a great many available lots, as will be seen by referring to the comparison in caption 'Lots and Buildings.' There has been a great increase in lot applications.

LOTS AND BUILDINGS.

In 1910-11 there were fifty applications for Banff townsite lots, but this year there has been a large increase. Since the 1st of April we have accepted 170 new applications, which at a glance will present the satisfactory increase of 120 over last year.

The increase of building has been enormous. The amount according to a conservative estimate totals $640,100 for the year. This includes the improvements at the Banff Springs Hotel, but not the $425,000 spent at the Lake Louise Chalet. If this were taken into consideration it would be seen that nearly one million dollars were invested. As an aid to ready reference the following will show the comparison:—

	1910-11.	1911-12.
Lot applications (Banff)..	50	170
Lot applications (Minnewanka)..	13	8
Lot applications (Canmore)..	46	37
Improvements (Banff)..	$212,000	$640,100
Improvements (Lake Louise)..	......	425,000

WATERWORKS AND SEWER SYSTEM.

On the 31st day of March, 1911, we had 44,930 feet of completed water mains and 13,520 feet of sewer installed and in use, and since that date we have been opening up new streets, which necessitates the extension of both water and sewer mains. This new work amounts to 1,674 feet of water mains and 780 feet of sewer. We circled block number ten from Wolf street to Elk street and from the latter to Wolf on Lynx street. This makes a total of 46,604 feet of water mains and 14,300 feet of sewer at present in use in connection with our water supply and sewer system.

In addition to the extensions we built a large dam and concrete settling tank and rock wing at the intake at Forty Mile creek. Since the old works were erected at this point we have been caused considerable trouble, as they were of poor construction and not at all in conformity with the perfection of the remainder of the system. I had a party engaged on this work up to the time frost prevented a continuance, and will complete the work early this spring before the spring freshets.

The advantage of these improvements will be the elimination of any chance of clogging up the large intake pipe with timber, sticks and gravel, which in the past has been so troublesome as to at times entirely cut off the water supply. Provision has been made so that the flow may be turned from the settling tank and may be supplied to the town direct. This will allow for the cleaning out of the tank from time to time as necessity may demand. After this work is completed, we will have the most efficient and permanent water works system in the province.

AVIARY.

The birds have all done exceedingly well. We lost one North American vulture and one Golden eagle. The last named was fighting with its companion and must have caught its foot in the wire netting as its foot was twisted entirely off. We possess at this time:—

	Total.
Great horned owl	1
North American vulture	1
Reeves pheasant	1
English ring-neck	
Golden pheasant	
Golden eagle	1
Silver pheasant	3
Lady Amherst	1
Bald eagle	1
Osprey	
Swainson's hawks	2
Canadian wild geese	5

ANIMALS.

For a number of years, I understand, endeavours have been made to secure a grizzly bear cub, and I have pleasure in reporting that I have been successful in obtaining two. They were about six weeks old when I purchased them from an Indian, but at this time are large, militant representative specimens of this ferocious species. They are already becoming so powerful that provision must be made this spring to reinforce their cages, or to build entirely new ones. All our animals have done exceedingly well. Under my care there are at present:—

	Total.
Mountain gopher	2
Guinea pig	2
Pine marten	2
Mexican orange squirrel	1
Fox squirrels	4
Texas black squirrel	2
Beaver	2
Resus monkey	2
Kit fox	3
Red fox	2
Lynx	3
Racoon	2
Porcupine	3
Marmot	2
Wolverine	1
Badger	2
Coyotes	2
Timber wolves	3
Mountain lion	1
Black bear	1
Brown bear	1
Cinnamon bear	1
Grizzly bear	2

ANIMALS PADDOCK.

All the animals in the enclosure have thrived with the usual exception of the antelope. We shipped all we had of this species to Wainwright, Alberta. Two hybrid buffalo were killed and disposed of this winter, so that we have at present nothing but pure blood stock. The increase in the buffalo has been three for the season, making a total of twenty-five at this writing. Every animal came through the winter in good condition.

The Rocky Mountain sheep are contented with their surroundings and we should be proud of the possession of such perfect specimens.

HOT SPRINGS SULPHUR BATHS.

With reference to the Sulphur Springs, I can do little more than to urge once more the immediate undertaking of the erection of new bath houses. At the present time there is not sufficient accommodation and the methods of governing are antiquated. Patrons are not satisfied and now that the Banff Springs Hotel have built a very magnificent bath house and plunge, all hand-laid tiling and an excellent example of luxury and convenience, I do not anticipate receiving the patronage next season that we did last. The amount expended on the Canadian Pacific railway's bath alone is $70,000.

The government provides the water in its most natural state. It requires no artificial heating as the bath houses are located at the source of supply. If our buildings are improved and made adequate to the demands of the public, I am confident we will receive 90 per cent of the patronage as in the past, but without this improvement we cannot expect anything else but a gradual and perhaps immediate falling off in revenue.

In conclusion I desire once again to acknowledge the faithful work done by the employes who have worked under my direction during the past year. as well as the loyal and cordial support given me by the officers and the men of the Royal Northwest Mounted Police in my efforts to maintain law and order within my jurisdiction.

I have the honour to be, sir,
Your obedient servant,

A. B. MACDONALD,

Superintendent of Rocky Mountains Park.

No. 2 (a).

REPORT OF THE CURATOR OF BANFF MUSEUM.

BANFF, ALBERTA, April 1, 1912.

The Superintendent of
Rocky Mountains Park,
Banff, Alta.

SIR,—I have the honour to submit herewith my seventh annual report of the Rocky Mountains Park museum for the year ending March 31, 1912.

The number of visitors to the museum has been more or less steadily increasing not only during the summer, but also during the winter.

The following additions were made to the exhibits during the past year:—

A long-tailed weasel, by purchase.
An American pipit, by self.
An American white pelican, by purchase.
A pair of common red squirrels, by self.
Three eggs of the American bittern, by self.
One egg of the wood duck, presented.
Some fossils from near Crossfield, Alta. Presented by Mr. Ross Peecock.

During the season I made a large collection of insects, devoting early mornings, some evenings and several special days to the work. With duplicates of the specimens collected I was able to repay in some measure those who so kindly helped me to classify specimens.

I have again to thank Dr. L. O. Howard, Chief Entomologist of the Bureau of Entomology, of Washington, D.C., and through him his able specialists, for much assistance in classifying material; also to thank Mr. H. Wolley Dod, of Millarville, Alta., for his interest in naming specimens of Lepidoptera.

I have kept in view the getting together of a good representative collection of insects for the cabinet, and hope in the near future to be able to make an open exhibit of the more noticeable insects about the park with material now on hand.

A large collection of willows was made and these will be gone over as time allows. Amongst the lot are a few specimens at present not represented in the herbarium.

A second and more complete list of all the exhibits in the museum with added information was made up and sent to Ottawa to replace the original list which was lost in transit. A list of the original lot of birds received by the museum, with all label data was also made up and sent to the Victoria Museum, Ottawa, to be used in checking their own specimens.

I would suggest the getting of more cases, so that the specimens of mammals, &c., may be less crowded and also to allow of increasing the exhibits of mammals, birds, minerals, &c.

A book case should be provided for pamphlets, &c., and also a map-holder.

I think it would be in the interests of the museum and the park if in some way I were allowed to do some exploring in at present little known parts of the park, for a few weeks each season, in search of new material, photos, &c., say during June or July, in order to extend the interest and usefulness of the present interesting museum, my expenses being allowed for such work.

During the past year much information was given and I find the work increasing more or less yearly. This is my sixteenth year as curator of the museum and during that period I have tramped thousands of miles over prairie land and up mountains (in a given area) in quest of plants, insects, birds, mammals, fossils, rocks and general information, with the idea of getting together what fauna and flora, &c., are to be found about Banff with perhaps an extension of limits.

I have to acknowledge the kind assistance and encouragement given me in my work by those under whom I have had the honour to work and hope for continued help and encouragement.

I have the honour to be, sir,
Your obedient servant.

N. B. SANSON.

Curator Rocky Mountains Park Museum.

Number of visitors at the Museum from April 1, 1911, to March 31, 1912.

Canada	9,711
Yukon	7
Newfoundland	3
United States	3,932
Hawaiian Islands	9
South America	4
Mexico	3
Buenos Ayres	2
Argentine Republic	1
England	725
Scotland	211
Ireland	102
Wales	16
Isle of Man	4
Channel Islands	1
Australia	92
New South Wales	6
Tasmania	3
New Zealand	40
India	19
South Africa	12
Ceylon	5
Bermuda	2
Fiji Islands (Suva)	2
British West Indies (Grenada)	1
Borneo	1
Malay Straits	3
Germany	16
Holland	6
Belgium	8
Netherlands	1
Austria	16
France	14
China	11
Korea	7
Siam	1
Switzerland	12
Italy	9
Russia	6
Finland	2
Spain	5
Japan	3
Sweden	3
Norway	1
Denmark	3
Danish West Indies	2
Greece	2
Palestine	2
Turkey	1
Egypt	1
Total	15,049

METEOROLOGICAL TABLES.

Maximum and Minimum Temperatures and the General State of the Weather between April 1, 1911, and March 31, 1912.

Date.	Thermometer Readings.		Weather, &c.
	Maximum for day.	Minimum for day.	
1911.	°	°	
April 1....	28·2	21·8	Cloudy ; blustery ; snow ; some indifferent sleighing ; Bohemian waxwings.
" 2....	23·3	12·8	Cloudy ; light snow ; junco ; redpolls ; Mt. bluebirds.
" 3....	15·1	4·8	Fair ; large solar halo ; fresh ice on river.
" 4 ..	28·0	13·7	Fair ; thaws afternoon. Fine day. Flock of Swainson's leucosticte.
" 5....	28·9	7·3	Fair ; fine day and night.
" 6....	34·7	20·2	Fair ; no sleighing.
" 7 ...	40·4	10·8	Fair.
" 8....	48·8	22·9	Fair ; fine day and night ; redpolls ; vanessa antiopa butterfly. Main road drying.
" 9....	45·3	23·0	Cloudy ; Bow river open above boathouse. Snow flurries.
" 10....	42·0	28·8	Cloudy ; snow storms off and on all day.
" 11....	30·7	19·7	Cloudy ; snow flurries.
" 12....	36·0	10·8	Fair ; last snowbird ; robins plentiful.
" 13 ...	34·9	14·8	Fair ; Sandiego redwings.
" 14 ...	43·1	17·7	Fair ; very fine day.
" 15....	49·1	22·2	Fair ; ground bees.
" 16 ..	47·0	39·2	Cloudy ; squally wind ; main road dry.
" 17....	44·0	27·3	Fair ; fine day ; snow none to patches. Anemone patens variosa in flower.
" 18....	47·7	25·2	Cloudy ; song sparrows.
" 19....	53·2	34·7	Fair ; very fine day and night ; frogs piping ; aurora.
" 20 ...	61·4	25·3	Fair ; perfect day ; fine night ; aurora. Vanessa Milberti butterfly ; various insects.
" 21 ...	63·0	28·3	Fair ; very fine day and night ; few water insects.
" 22....	42·4	36·8	Cloudy ; light rain and snow. Distant terrestrial objects appear quite close and sound very distant. Ruby-crowned kinglets.
" 23....	58·7	26·6	Fair ; very fine day.
" 24....	60·5	28·5	Cloudy ; very fine day ; ruby-crowned kinglets. Flickers.
" 25....	53·0	35·9	Fair, light rain ; thunder.
" 26....	49·0	26·0	Fair ; very fine day ; buffle-head ducks and canvas-back ducks on river.
" 27 ...	42·7	27·4	
			Fair ; Audubon's warbler.
" 28....	49·0	27·0	Cloudy.
" 29....	55·3	19·9	Fair ; perfect day ; Shepherdia Canadensis in flower ; bumble bees ; tiger beetles, etc., grapta zephynis butterfly ; solitaire.
" 30 ..	60·5	22·2	
			Fair ; perfect day and fine night. Sweetcoltsfoot in flower.
May 1. .	55·0	28·4	Fair ; fine and calm day ; wild strawberry in flower.
" 2....	54·6	25·9	Cloudy.
" 3....	57·0	40·5	Cloudy.
" 4....	60·1	42·4	Fair ; very fine day and night.
" 5.. .	59·5	32·3	Cloudy ; fine day ; thunder. Light rain during night.
" 6....	43·9	34·8	Cloudy ; gale ; thunder.
" 7....	55·4	33·5	Fair ; fine day.
" 8....	49·1	29·0	Cloudy ; light rain.
" 9....	50·4	30·3	Cloudy ; swallows.
" 10....	52·4	30·3	Cloudy; primula McCallii in flower.
" 11....	51·1	30·8	Cloudy ; sparrow hawk.
" 12...	41·9	33·9	Cloudy ; rain ; aspen poplar leafing.
" 13....	38·0	33·1	Cloudy ; rain and snow
" 14....	57·9	32·3	Fair ; very fine day ; Audubon's warbler; white-crowned sparrows.

MAXIMUM and Minimum Temperatures, &c.—*Continued.*

Date.	Thermometer Readings.		Weather, etc.
	Maximum for day.	Minimum for day.	
1911.	°	°	
May 15....	48·0	28·3	Cloudy; rain; heavy dewfall. Cooper's sharpshinned hawk. Large flock Swainson's leucosticte.
" 16....	55·8	39·9	Cloudy, swallows; cowbirds; redwings; wild geese; duck.
" 17...	51·3	41·5	Cloudy, very squally wind.
" 18....	57·7	37·9	Fair.
" 19....	53·4	38·7	Cloudy, aurora; chipping sparrows.
" 20....	58·8	29·0	Fair; fine day and night; ruby-crowned kinglet, kingbirds, American pipit.
" 21....	52·1	39·3	Cloudy; light rain and snow; white crowned sparrow, juncos. Audubon's warbler.
" 22....	33·0	28·3	Cloudy; light snow. Townsend's solitaire. Thrushes; chipping sparrows.
" 23 ...	38·0	28·2	Cloudy; snow; white-winged scooter on Bow River.
" 24....	40·0	29·8	Cloudy; snow flurrries; Holbach's grebe on Bow River.
" 25 ...	46·8	28·1	Cloudy; all birds numerous.
" 26....	47·2	26·3	Cloudy; light snow; large flycatcher.
" 27...	48·0	26·2	Cloudy; spotted sandpiper.
" 28....	59·5	24·3	Fair; very fine day; kingfisher.
" 29....	64·2	27·8	Fair; fine day and night; humming bird; grouse drumming.
" 30....	69·6	35·9	Fair; very fine day and night.
" 31....	74·4	34·5	Fair; very fine day and night; rivers rise much.
June 1....	71·0	33·8	Fair; very fine day and night.
" 2....	71·3	35 2	Fair; rain with hail; thunder.
" 3....	59·1	38·0	Fair; fine day and night.
" 4....	57·0	29·3	Cloudy.
" 5....	59·0	31·4	Cloudy.
" 6....	59·3	35 2	Cloudy; light rain; yellow warbler.
" 7....	44·4	36·5	Cloudy; rain; thunderstorm; mountains obscured by cloud.
" 8....	60·4	37·8	Cloudy; fine day and night.
" 9....	60·3	44·9	Cloudy; fine day.
" 10....	66·2	44·2	Fair; perfect day and very fine warm night.
" 11....	74·0	39·0	Fair; thunderstorm.
" 12....	76·6	42·2	Fair; very fine day and night.
" 13..	72·4	39·0	Fair; thunder with light rain.
" 14....	69·6	39·4	Fair; fine day; thunder.
" 15....	73·4	37·9	Fair; very fine day and night.
" 16....	69·5	40·6	Fair; fine day and night.
" 17....	74·3	38 0	Fair: very fine day and night.
" 18....	74·5	37·0	Fair; perfect day.
" 19....	72·5	45·2	Fair; very fine day; Bow and Spray Rivers very high and very muddy.
" 20....	66·6	39·5	Fair; fine day.
" 21....	65·2	39·8	Fair; rain during night.
" 22....	74·0	50·2	Fair; rain; thunder.
" 23....	65·4	38·3	Cloudy; fine day; rain during night; thunderstorm.
" 24....	53·3	47·2	Cloudy; rain.
" 25....	60·6	41·2	Cloudy; fine day.
" 26....	65 3	38·7	Cloudy; fine day.
" 27....	58·4	50·1	Cloudy; rain.
" 28....	68·3	49·2	Cloudy; fine day and night.
" 29....	69·7	41·8	Fair; rain.
" 30....	55·1	45·8	Cloudy; rain.
July 1....	65·8	46·9	Cloudy; rain; very fine complete double rainbow.
" 2....	57·7	48·8	Cloudy; thunder; rain.
" 3...	59·3	42·7	Cloudy.
" 4....	54·3	39·9	Cloudy; rain.
" 5....	69·4	30·5	Fair; nearly all plants in flower in valley.
" 6....	73·4	38·3	Fair; thunder and lightning; rain.
" 7....	58·8	43·3	Fair; rain.
" 8....	59·7	39·0	Cloudy; rain.
" 9....	60·8	45·9	Cloudy; rain.
" 10....	65·4	42·8	Fair.
" 11....	60 9	35·8	Fair.

MAXIMUM and Minimum Temperatures, &c.—*Continued.*

Date.	Thermometer Readings.		Weather, &c.
	Maximum for day.	Minimum for day.	
1911.			
July 12	70·1	30·8	Fair ; perfect day.
" 13	79·3	34·2	Fair ; perfect day.
" 14	84·0	37·8	Fair ; perfect day.
" 15	84·3	42·6	Fair ; very fine day ; fine sunset.
" 16	83·5	44·2	Fair ; very fine day.
" 17	64·7	52·1	Fair ; fine day.
" 18	60·8	41·9	Cloudy ; rain during night.
" 19	55·2	40·7	Cloudy.
" 20	74·4	36·2	Fair ; perfect day.
" 21	75·5	48·4	Fair ; very fine day ; thunderstorm with light fall of rain ; thunder in loud peals.
" 22	60·0	44·2	Cloudy ; light rain.
" 23	73·5	37·4	Fair ; very fine day.
" 24	83·5	42·4	Fair ; very fine day and night.
" 25	86·2	42·3	Fair ; lightning ; very fine but hot day.
" 26	66·5	47·5	Fair.
" 27	68·1	40·3	Cloudy.
" 28	73·1	43·8	Fair ; fine day.
" 29	68·3	48·9	Cloudy.
" 30	65·5	39·3	Fair ; fine day.
" 31	68·2	37·0	Cloudy ; rain.
Aug. 1	64·8	44·9	Cloudy ; heavy rain during night ; fog.
" 2	62·1	42·9	Cloudy ; rain.
" 3	64·9	44·9	Fair ; fine day ; heavy rain during night.
" 4	58·4	42·2	Cloudy.
" 5	54·9	40·8	Cloudy ; rain.
" 6	52·1	45·2	Cloudy ; light rain.
" 7	46·3	43·0	Cloudy ; rain.
" 8	51·0	36·4	Cloudy ; rain.
" 9	64·0	37·7	Fair ; fine day.
" 10	66·6	32·9	Fair ; very fine day.
" 11	67·4	34·3	Fair ; thunder ; shooting stars.
" 12	69·5	34·8	Fair ; fine day ; thunder ; heavy dewfall ; shooting stars.
" 13	67·0	36·5	Fair ; rain ; fine day.
" 14	70·8	36·4	Fair ; lightning ; very fine day.
" 15	49·9	37·4	Cloudy ; thunder ; rain.
" 16	67·5	35·8	Fair ; fog ; very fine day.
" 17	73·7	37·8	Fair ; perfect day.
" 18	76·2	32·5	Fair ; perfect day.
" 19	73·6	36·2	Fair ; rain ; thunder and lightning
" 20	56·8	39·3	Cloudy ; light rain.
" 21	57·9	31·7	Cloudy ; light rain.
" 22	57·2	41·3	Cloudy.
" 23	68·2	30·2	Fair ; perfect day ; aurora.
" 24	70·1	33·2	Fair ; very fine day.
" 25	55·0	41·6	Cloudy ; very heavy rain, for about 4 hours during morning.
" 26	56·1	39·1	Cloudy.
" 27	68·3	35·9	Fair ; perfect day and fine night ; midges in swarms, but not troublesome.
" 28	67·0	40·8	Cloudy ; very fine night.
" 29	64·3	45·1	Cloudy ; fine day.
" 30	67·0	48·8	Fair ; fine day.
" 31	70·4	48·7	Fair ; squally wind but very fine day and fine night.
Sept. 1	71·5	38·3	Fair ; very fine day and night.
" 2	71·9	35·7	Fair ; very fine day and warm night.
" 3	53·9	50·2	Cloudy ; heavy rain.
" 4	47·9	43·3	Cloudy.
" 5	44·8	39·8	Cloudy.
" 6	45·8	35·7	Cloudy ; first snow on mountain tops.
" 7	56·3	29·0	Fair.
" 8	60·3	38·9	Fair ; fine day.
" 9	61·1	32·0	Fair ; fine day.
" 10	70·7	29·8	Fair ; perfect day.

MAXIMUM and Minimum Temperatures, &c.—*Continued.*

Date.	Thermometer Readings.		Weather, &c.
	Maximum for day.	Minimum for day.	
1911.	°	°	
Sept. 11	72·2	31·8	Fair ; perfect day and fine night.
" 12	72·4	32·8	Fair ; perfect day.
" 13	56·9	46·0	Cloudy ; strong wind.
" 14	60·0	46·0	Fair.
" 15	51·2	38·6	Cloudy ; squally wind ; rain.
" 16	48·3	39·7	Cloudy ; squally wind.
" 17	51·1	38·0	Cloudy ; light rain ; fresh snow on mountains.
" 18	51·0	35·3	Cloudy ; fine day.
" 19	53·2	33·2	Cloudy.
" 20	51·0	34·3	Cloudy ; light rain ; changing to snow at midnight.
" 21	34·3	29·3	Cloudy ; light rain and snow.
" 22	31·2	26·4	Cloudy ; light snow.
" 23	35·6	25·1	Cloudy ; light snow ; raw day.
" 24	43·2	18·6	Fair ; fine day.
" 25	53·5	23·2	Fair ; perfect day.
" 26	59·4	25·0	Fair ; perfect day.
" 27	54·3	28·2	Fair.
" 28	54·1	39·4	Fair ; very fine day.
" 29	52·1	34·4	Fair ; rain.
" 30	48·8	26·4	Fair ; very fine day.
Oct. 1	48·4	26·2	Cloudy ; rain and snow.
" 2	38·0	32·7	Cloudy ; light snow.
" 3	47·5	32·5	Fair.
" 4	47·2	28·5	Cloudy.
" 5	51·0	29·2	Fair ; perfect day ; leaves blowing off poplars.
" 6	53·9	34·0	Fair ; a gale ; fine warm night.
" 7	64·5	39·2	Fair ; perfect day : fine night.
" 8	62·4	29·8	Fair ; very fine day.
" 9	63·2	27·6	Fair ; very fine day ; fine sunrise.
" 10	60·0	31·8	Fair ; very fine day ; aurora.
" 11	57·3	27·3	Fair ; perfect day ; fine sunset.
" 12	60·8	27·2	Fair ; perfect day.
" 13	56·3	31·4	Cloudy ; light rain during night ; fine sunrise ; lightning 10 p.m.
" 14	47·6	39·8	Cloudy.
" 15	52·0	35·7	Fair ; a gale ; very fine sunrise.
" 16	53·3	43·6	Fair ; very fine day ; strong wind ; aurora.
" 17	41·0	26·8	Fair.
" 18	40·2	26·1	Cloudy.
" 19	38·0	17·4	Cloudy ; fine sunrise ; ponds frozen.
" 20	43·7	23·8	Cloudy ; snow flurries during night ; fine sunset.
" 21	53·8	28·3	Fair ; perfect day ; fine sunset ; clear night.
" 22	47·2	22·3	Fair ; perfect day : observed comet 6 a.m. in east.
" 23	35·4	28·0	Cloudy ; snow flurries.
" 24	38·3	23·8	Fair ; perfect day.
" 25	41·6	9·8	Fair ; perfect day ; shooting stars ; skating in ponds.
" 26	41·4	6·8	Fair ; perfect day.
" 27	40·5	9·0	Fair ; perfect day ; snowbird.
" 28	47·9	11·0	Fair ; perfect day.
" 29	41·3	10·0	Fair ; very fine day.
" 30	44·0	11·5	Fair ; perfect day.
" 31	29·2	15·8	Fair.
Nov. 1	42·1	6·8	Fair ; perfect day ; Bow river frozen to near boathouse.
" 2	45·8	18·9	Fair ; very fine day ; very fine sunset.
" 3	39·4	24·4	Cloudy.
" 4	41·4	30·9	Cloudy ; fine day.
" 5	35·2	22·1	Cloudy ; snow flurries.
" 6	35·8	22·8	Cloudy.
" 7	14·2	8·0	Cloudy ; very squally wind with snow flurries ; snow during night.
" 8	2·3	— 4·2	Cloudy ; about 4 inches of snow on ground ; indifferent sleighing.
" 9	— 6·0	—16·3	Fair ; fine day.
" 10	— 8·8	—38·0	Fair ; coldest day of winter, but fine ; clear calm day.
" 11	0·4	—37·1	Fair ; mostly calm clear day.
" 12	— 2·2	—11·4	Cloudy ; snow ; blustering afternoon and evening.

MAXIMUM and Minimum Temperatures, &c.—*Continued*

Date.	Thermometer Readings.		Weather, etc.
	Maximum for day.	Minimum for day.	
1911.	°	°	
" 13....	— 8·3	—17·6	Cloudy ; blustery ; large solar halos ; light snow.
" 14....	19·2	—17·1	Cloudy ; snow.
" 15 ...	32·8	17·8	Fair ; strong wind afternoon.
" 16 ...	30·0	18·8	Fair ; strong wind late afternoon.
" 17...	33·4	24·2	Cloudy ; strong wind for 1 hour ; Bow and Spray rivers rise.
" 18....	42·3	31·7	Cloudy ; light rain and snow ; strong wind late afternoon.
" 19....	33·0	27·7	Cloudy ; light snow during night.
" 20....	35·5	22·8	Fair ; fine day ; light snow during night ; flock grosbeaks.
" 21....	37·3	21·8	Cloudy ; fine day.
" 22....	28·0	8·8	Fair ; fine day.
" 23....	32·9	14·0	Fair ; strong wind morning.
" 24....	36·9	20·7	Fair ; strong coldish wind.
" 25....	32·3	27·8	Cloudy ; snow.
" 26....	22·3	8·5	Fair ; light snow ; sleighing good.
" 27....	15·0	—13·9	Fair ; fine clear day.
" 28....	20·8	0·8	Fair ; very squally ; cold wind ; a gale ; very cold ; very fine sunset.
" 29....	25·7	13·3	Fair.
" 30....	33·2	20·3	Cloudy ; ice on Bow about 11 inches.
Dec. 1.....	39·7	29·7	Cloudy.
" 2.....	33·2	15·9	Fair ; perfect day ; beautiful moonlight night.
" 3.....	31·2	16·0	Fair ; very fine day.
" 4.....	33·9	12·4	Fair ; perfect day ; fine moonlight night.
" 5.....	32·7	23·4	Fair ; perfect day ; fine moonlight night.
" 6.....	33·0	10·2	Cloudy ; sleighing indifferent.
" 7.....	32·1	24·2	Cloudy.
" 8.....	36·2	28·0	Cloudy.
" 9.....	32·0	26·6	Fair ; fine day.
" 10.....	30·0	18·0	Fair ; fine day.
" 11....	26·0	6·0	Fair ; fine day.
" 12.....	30·3	22·1	Fair ; fine day.
" 13.....	29·0	12·7	Fair ; very fine day.
" 14.....	28·3	19·2	Fair ; very fine day.
" 15.....	27·0	15·9	Cloudy ; strong wind.
" 16.....	20·2	9·6	Fair ; very fine day ; Lake Minnewanka frozen.
" 17.....	13·0	— 8·3	Fair ; perfect day.
" 18.....	20·8	2·9	Cloudy ; squally wind afternoon.
" 19....	22·8	10·9	Cloudy ; squally ; cold wind.
" 20. ...	24·0	10·0	Fair ; perfect day.
" 21.....	18·9	— 0·1	Fair ; very cold squally wind.
" 22.....	36·5	16·8	Cloudy ; ice on Bow river 14 in.; squally wind in evening.
" 23.....	23·8	11·8	Cloudy ; snow ; Lake Minnewanka ice bearable.
" 24.....	1·9	−12·9	Fair ; perfect day ; sleighing good.
" 25. ...	13·4	−12·7	Fair ; very fine day ; temperature rises during night.
" 26.....	11·2	−13·3	Fair ; fine calm day.
" 27.....	2·9	−11·0	Cloudy ; little snow ; very squally cold wind ; snow drifting.
" 28.....	12·3	−17·4	Fair ; snow flurries ; cold and squally wind.
" 29.....	15·2	−25·7	Fair ; fine calm day ; sound very distinct.
" 30.....	0·2	−28·8	Fair ; perfect day.
" 31.....	7·3	−26·3	Fair ; Arctic three-toed woodpecker.
1912.			
Jan. 1....	5·8	−11·0	Fair ; very fine day ; large lunar corona.
" 2.....	4·5	−25·2	Fair ; very fine day.
" 3.....	10·4	− 6·0	Fair ; very fine moonlight night.
" 4.....	4·3	− 8·2	Fair ; light snow during night.
" 5.....	5·0	− 3·2	Cloudy ; clear moonlight night ; mock sun.
" 6.....	7·7	31·6	Fair ; clear bright day ; ice on Bow 18½ inches.
" 7....	15·3	18·4	Cloudy ; squally wind.
" 8.....	5·0	8·8	Fair ; cold wind morning ; clear sky all day.
" 9.....	14·9	23·6	Cloudy ; squally wind ; snow flurries ; extremely cold day ; mock sun ; snow during night

MAXIMUM and Minimum Temperatures, &c.—*Continued.*

Date.	Thermometer Readings.		Weather, &c.
	Maximum for day.	Minimum for day.	
1912.	°	°	
Jan. 10....	18·8	28·8	Cloudy; light snow.
" 11.....	12·2	37·6	Fair.
" 12.....	23·2	13·2	Cloudy; squally wind; light snow.
" 13.....	35·8	5·8	Cloudy; temp. drops 26° in 3 hours afternoon; again rises many degrees by 8 p.m.; ice on Bow 24 in.; cutting ice on Bow; 13 in. of snow.
" 14.....	44·6	1·4	Cloudy; chinook all day; much snow goes.
" 15.....	41·0	34·6	Cloudy; slippery walking; Clarke's crow.
" 16.....	29·2	19·7	Cloudy; snow.
" 17.....	9·2	4·7	Fair; perfect day.
" 18.....	14·1	16·0	Fair; fine day; squally wind evening; fine sunset.
" 19.....	12·2	2·8	Fair; strong wind all day.
" 20.....	22·6	1·1	Cloudy; squally wind; cold all day.
" 21.....	35·0	18·5	Cloudy; squally wind morning.
" 22....	32·0	16·2	Fair; very fine day.
" 23.....	27·1	11·3	Fair; perfect day; fine night.
" 24.....	31·0	13·0	Cloudy; strong wind all day; chickadees.
" 25.....	39·4	28·1	Cloudy; fine mild day; very fine night.
" 26.....	25·3	11·8	Cloudy; calm fine day.
" 27.....	32·1	15·2	Cloudy; ice on Bow about 26½ inches.
" 28.....	31·8	12·5	Cloudy; fine mild night.
" 29.....	42·0	26·3	Cloudy; much snow goes; little snow during night.
" 30....	38·0	30·7	Fair; very fine day.
" 31.....	29·3	9·2	Fair; perfect day.
Feb. 1....	34·2	11·1	Fair; perfect day; fine clear moonlight night; very fine sunset.
" 2...	38·2	10·2	Fair; perfect day; fine clear moonlight night.
" 3....	27·0	− 1·1	Fair; perfect day; clear moonlight night; ice as cut on Bow river 27 inches.
" 4....	25·2	− 3·3	Fair; perfect day; clear moonlight night.
" 5....	35·2	3·5	Fair; very large lunar corona.
" 6....	31·0	26·0	Cloudy.
" 7....	23·0	17·2	Cloudy.
" 8...	35·5	9·8	Cloudy.
" 9....	36·1	23·2	Fair; fine day.
" 10....	38·8	29·0	Cloudy.
" 11....	37·1	24·8	Fair; fine afternoon; very fine sunset.
" 12....	34·1	18·1	Fair; very fine day.
" 13....	36·5	21·9	Cloudy; chinooking; water ousel.
" 14....	38·2	29·0	Fair; very fine day; sleighing indifferent; Banff Bonspiel commencing.
" 15....	35·8	31·2	Cloudy; squally to very squally wind.
" 16....	38·0	28·2	Cloudy; chinooking; fine day.
" 17....	36·1	25·1	Cloudy.
" 18....	35·3	19·8	Fair; very fine day.
" 19....	28·8	12·6	Fair; snow flurries.
" 20....	28·6	2·3	Fair; fine day.
" 21....	32·3	18·4	Fair.
" 22....	34·0	22·0	Fair; very fine day; fine clear night.
" 23....	33·0	1·6	Fair; very fine day.
" 24....	30·8	0·8	Fair; very fine day; clear night; wheeled vehicles mostly in use.
" 25...	30·6	1·7	Fair; fine day.
" 26...	29·0	15·2	Fair; light snow mostly during night.
" 27....	20·2	4·9	Fair; fine day and night; mock sun.
" 28....	17·0	13·4	Fair; perfect day.
" 29....	17·9	20·4	Cloudy; very large solar and lunar halo.
Mar. 1...	14·3	2·5	Fair; fine day, very large solar halo.
" 2....	21·2	−21·2	Fair; perfect day; clear moonlight night.
" 3..	25·7	−13·3	Fair; perfect day.
" 4....	25·5	−13·7	Fair; perfect day; clear night.
" 5....	33·2	−12·0	Fair; perfect day; clear night.
" 6....	22·9	− 4·7	Fair; fine day; clear night.
" 7....	26·2	−17·6	Fair; perfect day; clear night; 8 a.m. coldest part of day.
" 8....	39·8	−14·4	Fair; perfect day; a range of 54·2 to-day.

MAXIMUM and Minimum Temperatures, &c.—*Concluded.*

Date.	Thermometer Readings. Maximum for day.	Thermometer Readings. Minimum for day.	Weather, etc.
1911.	°	°	
Mar. 9....	39·2	– 3·8	Fair ; perfect day ; clear night.
" 10...	37·2	– 3·8	Fair ; perfect day ; clear night.
" 11....	37·2	– 2·1	Fair ; perfect day.
" 12....	21·8	– 3·9	Cloudy ; sleighing only on sheltered roads.
" 13...	33·3	– 7·9	Fair.
" 14 ...	33·3	– 0·8	Cloudy.
" 15 ...	36·9	13·8	Cloudy ; fine day.
" 16....	35·3	2·3	Fair ; fine sunrise ; ice on Bow River 23½ inches.
" 17....	33·3	24·0	Cloudy ; snow during night.
" 18 ...	20·5	13·7	Cloudy.
" 19....	23·2	—14·4	Fair.
" 20....	35·0	— 8·8	Fair ; perfect day.
" 21....	40·2	9·9	Fair ; large solar halo ; no sleighing.
" 22 ...	44·0	18·3	Fair ; very fine day ; robin heard ; blow-flies about.
" 23....	46·1	12·0	Fair ; fine day, fine night ; large solar halo ; last snowbird seen.
" 24....	49·7	18·4	Fair ; very fine day ; main road dry in places.
" 25....	46·9	29·9	Cloudy ; fine day ; light snow ; Canada jays building on mountain.
" 26....	46·8	23·0	Fair ; very fine day ; snow on sheltered roads only ; ice on Lake Minnewanka 30 in.; sap oozing on pines.
" 27....	50·9	27·1	Fair ; main road dry about town ; snow in patches ; robin singing ; very fine day.
" 28...	47·1	36·4	Cloudy ; catkins on some willows and aspen ; poplars showing growth.
" 29....	39·0	25·8	Fair ; fine day ; large flock redpolls.
" 30....	44·3	11·9	Fair ; snow flurries ; main road all dry ; fine mild night.
" 31....	50·6	29·7	Fair ; very fine day, but squally wind.

Highest tempeature for the 12 months	July 25, 1911	......	86·2
Lowest " "	Nov. 10, 1911	..... .	—38·0

N. B. SANSON,
Observer.

No. 2 (B).

VISITORS AT THE PARK.

ANALYSIS OF NATIONALITIES OF VISITORS TO BANFF SPRINGS AND HOTELS.

List of bathers at Upper Hot Springs from April 1, 1911, to March 31. 1912.

Canada	16,703
United States	1,418
Scotland	60
England	170
Australia	28
Ireland	11
China	9
Germany	8
South Africa	3
Ceylon	3
South America	1
Total	18,414
Resident bathers	1,230
	19,644

Visitors at Cave and Basin from April 1, 1911, to March 31, 1912.

Canada	5,187
England	554
Scotland	301
Ireland	62
Australia	65
New Zealand	64
South Africa	15
India	21
Ceylon	5
Samoa	4
Honolulu	6
Fiji Islands	3
United States	8,462
Argentina	7
China	15
Japan	11
France	20
Germany	19
Sweden	20
Switzerland	25
Norway	7
Total	14,873

Number of visitors registered at the Banff Springs Hotel. 14,403
Note of nationalities not available.

Number of visitors registered at the Sanitarium Hotel, Banff, from April 1, 1911, to December 1, 1911.

(Hotel closed December 1, 1911 to March 31, 1912.)

Canada	4,300
United States	1,986
England	411
Scotland	109
New Zealand	203
China	19
South Africa	59
Australia	60
Japan	11
Denmark	3
India	1
Ireland	195
Holland	19
Germany	58
Chili	3
Italy	20
Switzerland	49
Austria	9
France	90
Phillipine Islands	3
Mexico	1
Total	7,617

Number of visitors registered at the Alberta Hotel from April 1, 1911, to March 31, 1912.

Canada	5,110
United States	1,191
England	301
Scotland	190
Ireland	172
Sweden	15
New Zealand	78
Australia	16
China	38
France	9
Germany	4
Total	7,834

Number of visitors registered at the Grand View Villa from April 1, 1911, to March 31, 1912.

Canada	3,390
United States	701
England	139
Ireland	79
China	3
Scotland	109
Australia	73

France	10
Holland	1
New Zealand	51
Austria	3
Mexico	5
Total	4,564

Number of visitors registered at the Mount Royal Hotel, 7,963.
Note of nationalities not available.

Number of visitors registered at the Hot Springs Hydropathic Hotel, from April 1, 1911, to March 31, 1912.

Canada	2,001
United States	507
England	103
Scotland	90
New Zealand	15
Germany	37
Australia	59
Ireland	103
Austria	29
Total	2,944

Number of visitors registered at the King Edward Hotel, Banff, from April 1, 1911, to March 31, 1912.

Canada	4,202
United States	1,079
England	55
Scotland	19
Ireland	6
Australia	16
New Zealand	8
South Africa	2
Korea	4
India	1
Belgium	1
France	2
Denmark	2
Germany	4
	5,401
Meals, excursionists	1,500
Total	6,901

Number of visitors registered at Homestead Hotel from April 1, 1911, to March 31, 1912. Total, 1,000.

Note of nationalities not available.

Number of visitors at Lake Louise Chalet from April 1, 1911, to March 31, 1912. Total 12,459.

Note of nationalities not available.

SUMMARY.

Banff Springs Hotel	14,443
Sanitarium Hotel	7,617
Alberta Hotel	7,834
Grand View Villa	4,564
Mount Royal Hotel	7,963
Hot Springs Hydropathic Hotel	2,944
King Edward Hotel	6,901
Homestead (Temperance Hotel)	1,000
Lake Louise Chalet	12,459
Summer cottagers	3,000
Estimated excursionists not registered	5,000
Total	73,725
Season 1910-11	63,494
Increase	10,231

No. 2C.

THE ALPINE CLUB OF CANADA.

The Alpine Club House was open all the season and many tourists who stayed more than a day in Banff found their way to see it and to enjoy the magnificent views from its verandahs. The secretary continues to be the recipient of endless questions concerning the mountain regions, which are answered to the best of his ability. In fact, the average traveller seems to regard the Alpine Club House as a bureau to give every kind of information and to receive every possible kind of complaint, whether concerning hotels, packers, railway arrangements, the management of the parks and even the government of the country.

A club party under Mr. Jas. F. Porter, of Chicago, camped for some time in the neighbourhood of Baker Peak, climbing and exploring all the adjoining country. The head of the Red Deer Valley was also explored and camp was then removed to the lower of the two lakes west of Fossil mountain, a miniature Lake Louise. Here Pika Peak and Ptarmigan Peak were attempted and some time spent in the study of the fossils of the neighbourhood, which appeared to be similar to those in the well-known fossil bed on Mt. Stephen. In the course of their wandering several new lakes were discovered. A detailed account of the expedition will appear in the 1912 issue of the *Canadian Alpine Journal.*

Another club party, including Mr. L. L. Delafield, of New York, and Mr. L. M. Earle, of Liverpool, England, also a member of the English Alpine Club, climbed in this same neighbourhood and made what are believed to be the first ascents of Mt. Richardson and Pika Peak, and Ptarmigan Peak by a new route.

Other independent parties of club members camped in the neighbourhood of Paradise Valley and climbed Mt. Temple, Aberdeen and other adjacent peaks.

The members staying at the Club House were drawn from the following places:—

IN CANADA.

British Columbia.—Alberni, Golden, Keremeos, Sidney, Vancouver, Victoria.

Alberta.—Brant, Calgary, Camrose, Carbon, Cowley, Edmonton, Eyremore, Happy Hill, High River, Leduc, Lethbridge, Nokomis, Strathcona.

Saskatchewan.—Prince Albert, Saskatoon, Yorkton.

Manitoba.—Winnipeg.

Ontario.—Brantford, London, Port Colborne, Toronto, Woodstock.

Quebec.—Montreal.

IN THE UNITED STATES OF AMERICA.

California.—Ocean Park.

Indiana.—Lafayette.

Massachusetts.—Boston.

New Jersey.—Summit.

New York.—New York, Rochester.

Pennsylvania.—Bryn Mawr, Philadelphia.

Washington.—Spokane.

OVERSEAS.

England.—London.

Austria.—Vienna.

No. 2D.

STATISTICAL SUMMARY OF INFORMATION *RE* ROADS, TRAILS, SIDEWALKS, WATER AND SEWER SYSTEMS AT BANFF.

MILEAGE OF ROADS AND TRAILS, ROCKY MOUNTAINS PARK.

Roads.	Miles.
Kananaskis to Banff	35
Banff to Hot Springs	3
" to Sundance Canyon	4
" to lumber camp on Spray River	8
Tunnel Mountain Drive	5
To Lake Minnewanka	9
Banff to Laggan Coach Road	5
Laggan to Lake Louise	3
Lake Louise to Moraine Lake	9
Bankhead Road to Buffalo Paddock	1
Loop Drive	7
Canmore Station to Mines	1.5
Town streets	6
Total	96.5

Trails.	
Spray to Mt. Assiniboine	18
Banff to Spray Lakes	30
Bow Summit Trail	30
Banff to Brewster Creek via Sundance	16
Simpson-Pipestone Trail	6
Cascade Trail	28
Mt. Edith Trail	11
To Lake Minnewanka	14
Simpson to Simpson Summit	14
Total	167

TELEPHONE SYSTEM AT BANFF.

The telephone system at Banff was installed in 1907. It comprised originally 27 miles of lines built at a total cost of $5,582. Since that date a number of extensions have been made, bringing the number of lines now constructed up to 34¾ miles. This includes the following lines:

To Bankhead	5	miles	connecting	3	phones.
To Lake Minnewanka	8	"	"	3	"
To the Observatory Sulphur Mountain	4	"	"	1	"
To Upper Hot Springs	3	"	"	1	"
To Hydropathic Hotel	3	"	"	1	"
To Grand View Villa and Alpine Club	3	"	"	2	"
To Cave and Basin	1	"	"	1	"

Business phones, 35.
Private phones, 19.
The Banff system is also connected with the Alberta long distance system.

SUMMARY OF WATER MAINS.

Town.

Street.	Mains.	Hydrants.	Valves.
	Ft.	No.	No.
Banff Ave	4,800	11	11
Beaver	1,700	5	3
Muskrat	1,475	3	2
Otter	1,475	3	2
Bear	1,475	3	2
Buffalo	1,400	2	5
Cariboo	1,475	4	7
Lynx	1,300	5	4
Squirrel	650	2	2
Elk	325	1	....
Marten	600	1	1
Wolf	1,850	6	8
Totals	18,525	46	47

Villa.

Avenue.	Mains.	Hydrants.	Valves.
	Ft.	No.	No.
Cave	1,200	2	4
Spray	2,925	7	7
Totals	4,125	9	11

SUMMARY OF SEWERS.

Town.

Street.	Mains.	Manholes.
	Ft.	No.
Banff Ave	1,400	5
Beaver	1,400	6
Muskrat	1,650	7
Otter	1,400	3
Bear	1,050	5
Buffalo	1,400	....
Cariboo	1,575	3
Lynx	825	3
Squirrel	675	2
Marten	600	3
Wolf	175	....
Totals	12,150	37

Villa.

Avenue.	Mains.	Manholes.
	Ft.	No.
River—From point opposite Sanitarium Hotel to Manhole where trunk sewer crossed Bow River	500	1
Trunk sewer (concrete) from Bow River opposite Muskrat Street to outlet above Falls	1,450	6
Total	1,950	7

STATEMENT OF CINDER WALKS CONSTRUCTED.

Town.

Street.	From	To.	Side.	Length.	Width.
				Feet.	Feet.
Otter	Buffalo	Wolf	East	1,344	6
Otter	Cariboo	Wolf	West	600	6
Muskrat	Buffalo	Wolf	West	1,344	6
Beaver	Buffalo	Wolf	East and West	2,688	6
Buffalo	Bear	Otter	North	1,216	6
Bear	Buffalo	Cariboo	East	725	4½
Bear	Cariboo	Wolf	West	600	4½
Lynx	Cariboo	C. P. R. Station	East	1,800	6
Squirrel	Lynx	Elk	South-east	627	4½
Banff Ave.	Cariboo	Buffalo Paddock	North-west	1½ miles	6
Total				3 miles, 1,008 yds.	

Villa.

Avenue.	From.	To.	Side.	Length.	Width.
				Feet.	Feet.
Cave	Bow Bridge	Cave and Basin	East	1 mile	6
Spray	Bow Bridge	C. P. R. Hotel	East	3,600 ft.	6
				1 mile, 1,200 yds.	

STATEMENT OF PLANK WALKS.

Avenue or Street.	From.	To.	Side.	Length.	Width.
				Feet.	Feet.
Banff	Cariboo	Wolf	East	600	6
Cariboo	Banff Ave	Beaver St	South	260	4½
Banff Ave	Buffalo	Bow Bridge	East and West	700	4½
Total				320 yds.	

STATEMENT OF CEMENT WALKS.

Avenue or Street.	From.	To.	Side.	Length.	Width.
				Feet.	Feet.
Banff	Buffalo	Wolf	East and West	1,425	12
				475 yds.	

No. 3.

REPORT OF THE SUPERINTENDENT OF YOHO AND GLACIER PARKS.

Field, B.C., April 1, 1912.

The Chief Superintendent of
Dominion Parks,
Edmonton, Alta.

Sir,—I have the honour to submit herewith my third annual report as Superintendent of the Yoho and Glacier parks for the fiscal year ending March 31, 1912.

YOHO PARK.

The spring of 1911 brought with it the need of the usual amount of repairs to roads, bridges and trails. All roads were raked clear of stones, the ditches cleaned out and the culverts repaired. Each bridge was inspected and repaired wherever necessary. The trails were gone over and cleared of fallen timber and boulders. The streets in the town of Field were raked; the sidewalks were repaired and any trees planted during the previous year which were found dead were replaced with others of the proper size.

A tool-shed and stable combined was erected on Lot No. 4, in Block 1, Field Townsite, thus providing stable room for the horses of the Superintendent and Fire warden as well as a storage for tools, material, &c., used in connection with construction work in the Yoho park.

The small bridges in the vicinity of Field, nine in number, were railed on each side with peeled poles, adding to their appearance as well as to the safety of the traveller.

One dozen additional rustic seats were placed at different points along the Yoho Valley and Emerald lake drives. The material used in the construction of these seats as well as that used in the construction of all railing was peeled and painted.

A carriage road was built connecting the Natural Bridge with the Emerald lake drive at a point near the three-mile post, a distance of three-quarters of a mile, thus completing a return drive, leaving the last named at the two-mile post, passing the bridge and again meeting the Emerald lake drive as above stated at the three-mile post.

The work of railing the Natural Bridge was continued from last year and fifty yards of heavy railing were added to it and to the steep embankment in the immediate vicinity. The foot paths in close proximity to the bridge were gravelled and rustic seats were placed at different points where the scenery appeared most grand.

I would respectfully suggest that a small pavilion be erected at this point in the near future for the reason that it is fast becoming a popular place for pic-nickers. I might add that the Canadian Pacific Railway Company saw the need some years ago of a building of this kind here and had a rustic shelter erected. This has, however, become entirely inadequate.

A trail was constructed from the Natural Bridge to a canyon some distance down the Kicking Horse river, the beauty of which equals, if it does not surpass, that of the Natural Bridge itself. Railing was also placed along this canyon so that it may now be approached with safety.

Starting at a point on the Yoho Valley drive, an approximate distance of three and one-half miles from Field a carriage road was built to connect with the old grade of the Canadian Pacific railway which was abandoned by the company upon the completion of the spiral tunnels, along which road three hundred and fifty yards of railing were placed. The said grade was converted into a carriage road by removing the old railway ties as well as from six to eight inches of surface composed of a soft material. A considerable amount of work was also necessary to obtain a crossing over the new railway grade at Yoho station which was done by hauling in rock and the above mentioned soft material taken from the road surface. The bridges on this grade, four in number, were covered with three-inch planks and railed on each side. This completed a drive road from Field to within a few minutes' walk of Lake Wapta, an approximate distance of eight miles.

This road should, in my opinion, be continued next year to Stephen, the eastern boundary of the Yoho park, and I would also respectfully suggest that funds be provided in the appropriation for Rocky Mountains park to make the connection from this point to Laggan station; thus connecting, when the Banff-Laggan road has been completed, the three principal tourist points in the Rocky Mountain range and also allowing Field access to the Banff-Windermere and Banff-Calgary motor roads.

The Yoho Valley carriage road was continued to a point about three and one-half miles beyond the Takakkaw Falls. This completed approximately sixteen miles of this road all of which is in excellent condition for carriages. I may say here that this carriage road is, I think, at present of sufficient length for one day's drive and until such time as proper stopping places are provided in the valley I would recommend that new work in this connection be suspended.

A trail was built from Hector station on the line of the Canadian Pacific Railway to a meadow at the end of Sherbrooke lake, a distance of four and a half miles, at which point the Alpine Club of Canada held their sixth annual camp.

The completion of these roads and trails has made accessible those points of particular natural beauty which are bound to become more and more popular as they become better known. I furnish below a partial list of the different points of interest in Yoho Park with their approximate distance from Field:—

	Miles.
Fossil Beds	1½
Natural Bridge	2½
Natural Bridge Canyon	2¾
Mt. Stephen Glacier	3
Summit Lake	3
Emerald Lake	7
Takakkaw Falls	12
Laughing Falls	16½
Twin Falls	18
Yoho Glacier	18
Lake O'Hara (from Hector)	7
Lake McArthur (from Hector)	9

I hope that the regulations governing other Dominion Parks will, in the near future, be made to apply to Yoho Park and thus provide a system of game protection worthy of this park, the natural breeding ground for almost every species of large game native to the Rockies.

Some system of drainage should be provided for the village of Field which could be installed at a comparatively small cost. Already the Canadian Pacific Railway Company have installed a water system for supplying their hotels and shops from which many of the residents have been allowed to take their supply. Considering this fact it follows that a much larger quantity will be used than if taken from a well and proper drainage will be rendered impossible without installation of a sewerage system.

I would again respectfully suggest that the old wooden bridge over the Kicking Horse at Field be replaced next year by a steel bridge of ample width with provision for foot passengers.

THE ALPINE CLUB OF CANADA.

Of the six annual camps held by this club, three of this number have been held within the limits of the Yoho Park which speaks well for this region as an interesting ground for the mountaineer of some experience who glories in a 'good stiff climb.' With your permission I should like to incorporate in this report an extract from a report prepared by the secretary treasurer of the Alpine Club of Canada, which reads as follows:—

'The Alpine Club of Canada continued its work of bringing the mountain regions of the country to the notice of the people of Canada and of other nations. The Annual Camp was held in the meadow above Sherbrooke lake in the Yoho Park. The new trail to the lake, recommended by the superintendent, and constructed in the early part of last year was much appreciated and will render future access to one of the most charming spots in the mountains easy and pleasant. A subsidiary camp was placed at Ross Lake to facilitate the ascent of Pope's Peak, a most interesting climb for mountaineers of some experience. The lake is easily reached both from the Laggan-Hector trail and the railway. It is about three miles distant from Hector station.

'One hundred and fifty-four people were placed under canvas and the majority of them stayed for the life of the camp. A synopsis of places represented by provinces, states and countries is here given.

'IN CANADA.

'*British Columbia:* Alberni Chilliwack, Golden, Nanaimo, Revelstoke, Sidney, Vancouver and Victoria.

Alberta: Banff, Brant, Calgary, Carbon, Cowley, Evarts, Eyemore, Fernie, High River, Lethbridge, Macleod, Nokomis and Okotoks.

Saskatchewan: Prince Albert and Regina.

Manitoba: Brandon and Winnipeg.

Ontario: Toronto and Woodstock.

IN THE UNITED STATES OF AMERICA.

'*California:* Ocean Park.

Illinois: Galesburg.

Massachusetts: Boston.

New Jersey: Summit.

New York: Brooklyn and New York.

Ohio: Dayton.

Oregon: Portland.

Pennsylvania: Gladwyne, Glen Olden and Philadelphia.

Washington: Seattle and Spokane.

'OVERSEAS.

'*England:* London and Bude.

Switzerland: Berne, Grindelwald, Interlaken and Zurich.

'The following Mountaineering Clubs were represented: The Alpine Club (England), the American Alpine Club, the Swiss Alpine Club, the Appalachian Mountain Club, the Mazamas, the Mountaineers.

'Sixty-eight passed the graduation test for full membership upon Mt. Daly and Pope's Peak.

'The Government of British Columbia in response to the Club's invitation delegated Mr. W. W. Foster, the Deputy-Minister of Public Works, to repressent it in Camp. He expressed the great appreciation of his Government of the publicity work already done by the Club, and its ambition to open further fields. Until one, he said, had actually lived in the camp for a day or so, it was impossible to realize the enthusiasm and widespreading influence of a wonderful organization.'

SILVER-LEAD MINE.

The Monarch Mine which was first operated in 1882, and which has many times since that date been closed and opened by different companies, has again shown signs of life and now bids fair to become one of the largest silver-lead mines operating in British Columbia. A concentrator has been built in the immediate vicinity of the mine so that the ore may be separated before shipment to the smelter. Located as it is on the almost perpendicular face of Mt. Stephen, approximately twelve hundred feet above the railway, it is, I think, one of the most interesting sights in this locality.

GLACIER PARK.

About four miles of the proposed carriage road from Glacier to the Nakimu Caves were completed during the year. In the construction of this portion of the drive a bear-den slide was encountered, which could not be seen at the time that I estimated the cost of its construction, which resulted in retarding progress to some extent and the completion of one mile less than the entire distance estimated in my last annual report. Enough has been completed, however, to make an excellent drive winding as it does well above the famous loop of the Canadian Pacific Railway in plain view of the great and other smaller glaciers. I hope the Government will undertake during the next fiscal year the continuation of this drive to a point in the Cougar Valley immediately below the Caves from which point a suitable trail, with rustic steps where the incline is very steep could be constructed at a very small cost to allow access to the Caves.

A tool-shed was erected on this drive, a short distance from Glacier Station, for the storage of tools, material, &c., purchased in connection with construction work in this park.

Some repair work was done in the interior of the Caves in the way of strengthening the walks and adding hand railing wherever it was considered necessary.

The trail leading from the Glacier House to the Caves thence to Rogers Pass was cleared of fallen timber and mud slides.

In conclusion I desire to acknowledge the faithful work done by the foreman who worked under my direction during the last year.

I am, sir,

Your obedient servant,

G. E. HUNTER,

Superintendent.

MILEAGE OF ROADS AND TRAILS IN YOHO PARK.

Roads.

	Miles.
Yoho Valley Drive	16
Hector Drive	5
Emerald Lake Drive	7
Branch Drive to Natural Bridge and return	1½
Ottertail Drive	6
Total	35½

Trails.

	Miles.
From Field over Burgess Pass to end of Yoho Valley and return	25
Hector Station to Sherbrooke Lake	5
Hector Station to Lake O'Hara and Lake McArthur	10
From Emerald Lake Road to the Amiskwi river to the N. boundary of the old park	25
Ottertail Drive to Leanchoil	9
Leanchoil to southern boundary	20
Branch trail up Ice River	5
Branch trail to Fish Lake	6
Hector Station to Stephen	2
Total	57

No. 4.

REPORT OF THE SUPERINTENDENT OF BUFFALO PARK.

Wainwright, Alberta, April 1, 1912.

Howard Douglas, Esq.,
Chief Supt., Dominion Parks,
Edmonton, Alta.

Sir,—I beg to submit for your consideration my second annual report as Superintendent of Buffalo Park for the fiscal year ending March 31, 1912.

Owing to the almost continuous rains during the past summer and the difficulty which we had in securing teams and equipment at the proper time, the work in the park was not carried on as we would have liked.

The evergreen trees set out along the drive to the park and around the different grounds last year are thriving very well, though naturally with this class of trees the growth is very slow. A man was kept continually cutting weeds and cultivating around these trees during the early part of the summer.

The grounds around the superintendent's house were broken up and thoroughly cultivated for the purpose of planting with shrubs and grasses in accordance with a plan prepared by Norman M. Ross, of the Forestry Branch of the Interior Department.

The cottage and barn erected at the winter-quarters last spring have added greatly to the appearance of the place and are very much appreciated by the men stationed there. The old shack was moved and rebuilt and is being used at the present time as a bunk house by the teamsters and extra men, and the old stables were overhauled and are used for a storehouse for machinery and implements. I had a well sunk convenient to these new buildings which furnished an ample supply of water for both places.

The telephone line was extended to connect with the Hardisty entrance to the park and has been of great service on more than one occasion.

Under instructions from your office I had a corral built for the purpose of coralling and crating buffalo or any other animals we may have to ship from here to other parks. This corral was located in the small enclosure adjacent to Wainwright.

The water in the first well sunk at headquarters not being good we had to sink another one, and to get the supply needed we had to go to the foot of the hill on which the house is situated. As this was some four hundred and fifty feet from the house it was found necessary to instal an engine and pump to force the water up to the house and grounds. This has worked out very satisfactorily.

During the latter part of June and the first part of July the one hundred and seventy miles of fire-guard around and across the park were all thoroughly cultivated, but owing to so much rain the weeds grew very fast and before fall we had to plough over a large portion of the guards to make the park safe from fire. Fortunately they were not needed, as we had not a prairie fire in the neighbourhood of the park last fall. Since it takes a great deal of time to work over the guards into any kind of decent shape with the discs, I have decided that in the future it will pay better to plough and drag the guard each year, as this can be done as cheaply and will make a more satisfactory job of it.

We were rather unfortunate in our hay-making during the past season, as owing to so much rain and the boggy nature of our meadow it was almost impossible to make hay at all, and though the ditches put through the meadow a year ago were quite sufficient to carry off the water in an ordinary year, they proved entirely useless last season so that where we should have got eight hundred tons of hay, we only got about three hundred and fifty. If it had not been that we carried over some eight hundred tons of old hay from the year before we would have been up against it this winter. To guard against this I would suggest that as early as possible next spring we break up about three hundred acres and crop it with oats to be used as feed for the animals, and then any year that we get a good supply of hay from our meadow we can thresh our oats and have our seed and feed for the year following.

ANIMALS IN THE PARK.

My last report showed something over 800 buffalo in the park. With a couple of small shipments from Montana and the natural increase for the year we have now close to a thousand head, all in a thriving and healthy condition. The increase for the year (172) is very gratifying, with a very small loss, 9 head. This loss has been mostly old bulls, which no doubt have been killed off by the younger bulls during the season when their hide is of no value. If the suggestions made in my last year's report were adhered to and a number of these killed off in the fall when they were in their best fur it would save considerable in feed, besides, their robes would be worth something where now they are a total loss.

The moose imported last year have done very well; as they were only yearlings there was of course no increase.

The elk have done very well. With a shipment of seven head from Montana and a natural increase of four we have now eighteen head, all in beautiful condition.

The wild deer enclosed when the park was fenced evidently have increased as one of the riders saw twenty-five in one bunch last fall. I would estimate at least fifty head in the park now.

Among the antelope I can report no natural increase though we have now fourteen head, having shipped in what they had left at Banff, besides a shipment of eight head from Brooks station on the C.P.R.

The animals now in the park are as follows: Buffalo, 994, increase this year, 172, loss, 9; moose 11; elk 18, increase 4; deer, estimated, 50; antelope 14.

VISITORS TO THE PARK.

Last year I reported some eighteen hundred people having visited the park; this record has been exceeded already this year by nearly three hundred, the gatekeeper's diary showing 2,087 persons having passed through the gate in the past nine months. Several of these have been heard to express their delight at finding such a vast herd of wild animals in such natural surroundings.

The feathered game, evidently aware that they are protected, are gathering into the park in great numbers, and the country immediately surrounding the park has already proved a mecca for the sportsman.

Even the coyote, the most miserable of all animals, finding a certain amount of protection within the confines of the high wire fence is becoming a nuisance and a menace to the birds and small game, and I think it would be desirable to offer a bounty for his destruction.

In conclusion I am pleased to be able to state that there have been no infractions of the Park Regulations during the past year.

I am, sir,
Your obedient servant,
EDWARD ELLIS,
Superintendent.

No. 5.

REPORT OF THE SUPERINTENDENT OF ELK ISLAND PARK.

Elk Island Park,
Lamont, Alberta, April 1, 1912.

Howard Douglas, Esq.,
Chief Superintendent Dominion Parks,
Edmonton, Alta.

Sir,—I have the honour to submit my second annual report as Superintendent of Elk Island Park.

Owing to the exceptionally fine weather the buffalo left their winter quarters early last spring and were able to range out from the first week in March, thereby enabling us to carry over about forty tons of hay.

In my last report I mentioned having the material placed on the ground for the erection of a fence across the park, which would keep the buffalo on the open land. As soon as the frost was out of the ground last spring, three miles of fence were built along the lake shore and connected with the main fence on the south and west sides. This enclosure forms an extensive pasture for both the buffalo and moose and I am pleased to state that they have done well during the past year, and can always be seen by visitors.

The increase in buffalo numbered thirteen, with no loss. A cow, which had become disabled, was shot about the first of December, when her fur was in excellent condition and was disposed of according to instructions.

Last summer two moose calves were brought to the park and raised by hand until they were old enough to run at large. Later nine moose were shipped in from Banff and since the New Year three which were secured at Lesser Slave Lake, have been added to the number, making a total of fourteen. As stated above these are in the same pasture as the buffalo.

Last spring, after the hills had become bare, with still enough snow in the bush to prevent danger, a fire-guard was burned the whole way round the park and in this way fire was prevented from getting into the enclosure as it had done other years.

Early last fall a mile of fire-guard was ploughed along the west side. This had been ploughed before and makes about four miles of a fire-guard protecting the pasture and winter feed.

During the winter the grounds between the superintendent's house and the lake were cleared of all dead trees and brush, adding greatly to the appearance of the place.

The elk and deer and also what moose were in the park previous to 1911 are running at large in the timbered part of the park and when on my tours of inspection through this area I often see them. Last spring I counted seven young elk, which shows that the increase is satisfactory. The estimated number of elk at the present time is thirty-five and deer about forty-five.

The visitors for the year numbered nine hundred and ninety-eight, which was a decrease, but I might add that this was owing to such wet weather and to the bad roads during the summer. It would be well if the Provincial Government of Alberta would do something towards the improvement of the roads in the vicinity of the park.

The number of animals in the park at the present time is as follows: —

Buffalo	60
Moose	19
Elk, estimated	35
Deer, estimated	45
Total	159

In conclusion I wish to express my appreciation of the valuable support received from yourself and other officials in connection with the parks in enabling me to carry out my work.

Your obedient servant,

ARCHIBALD COXFORD,

Superintendent Elk Island Park.

No. 6.

REPORT OF THE SUPERINTENDENT OF WATERTON LAKE PARK.

WATERTON MILLS, ALBERTA, April 1, 1912.

The Chief Superintendent of
Dominion Parks,
Edmonton, Alta.

SIR,—I have the honour to submit this my annual report in matters pertaining to the Waterton Lake Park.

In writing of the park it is rather difficult to know just how much land and water there is within its boundaries. In the latter part of July, 1911, we learned of the reduction of its area, all the lakes and several of the mountains of great interest being cut out, a matter of much regret and a step extremely unpopular with the people of Southern Alberta.

It was hoped that instead of a reduction there would be an enlargement of this natural game breeding ground which adjoined the U. S. Glacier Park on which thousands of dollars are being expended, miles of good roads built and even Swiss cottages put up in desirable places for the use of tourists, 40,000 of whom are expected next summer.

It is scarcely necessary to revert to the large sums that people of this class spend in their outings, beside their probable investment in real estate, &c.

GENERAL DESCRIPTION.

Previous to the reduction the park contained 54 square miles, six along the international boundary and nine miles in a northerly direction, possessing many attractions for tourists, the lover of nature and the tired man of business who is confined to the office the greater part of the year.

LAKES.

The lakes, of which there are three, are connected; the upper or first lake is about nine miles long and approximately 1½ miles wide, and 300 feet deep. It is traversed by the international boundary line, nearly one-half of the lake being in Montana. The second lake is about two miles long by a mile wide and 60 feet deep. The third lake is one and one-half miles long, one mile wide and 25 feet deep. The Waterton river flows out of this lake.

FISH.

All of these lakes contain numbers of trout, some of which (Mamaycush) grow to a large size; a few have been taken that weighed 45 and 50 pounds each. Last summer one was caught that turned the scales at 25½ pounds. There are also pike and grayling. No netting has been allowed for some years.

LOTS.

In November, 1910, Villa lots were surveyed by Mr. W. F. O'Hara, D.L.S.

Lots 1, 2 and 3 in Block 4 are occupied by Mr. J. F. Hazzard who has built a pretty little hotel. Numbers 3 and 4 in block 6 are occupied by Christian F. Jensen who has an hotel and runs an automobile for passengers to and from Cardston. Applications have already been received for 13 other lots.

VISITORS.

There were a number of visitors last season but many were deterred from coming owing to the prevailing wet season and the height of the creeks and rivers.

BOATS.

Mr. Hazzard has a fine 4 H.P. gasoline launch and several row boats for hire. Dr. O. D. Weeks, a resident of Cardston has a nice little launch of 1½ H.P. (private) and Mr. Jensen has a number of row boats. If the roads are improved we will have autos from Macleod (60 miles) and Pincher Creek (40).

ROADS.

In the latter end of August, 1911, a wagon road was begun from Block 6 to Cameron Falls creek which, with the bridge across the same, was completed by the 13th of November, when all work had to be stopped owing to the heavy snowfall. And here, I would respectfully suggest that, owing to the early snowfall and the impossibility of doing any work late in the autumn, it would be advisable to commence any desired improvements early in the summer, more especially as there is a great difficulty in obtaining men during haying and harvest.

TRAILS.

A trail to Lake Bertha, a beautiful spot in the high mountains is much wished for, also a trail up Cameron Falls creek to Oil City, and should the park be enlarged, a trail on the east side of the lakes to the United States boundary line will be required.

BRIDGES.

Work was started this spring on a bridge over Pass Creek which we hope to see finished before high water. This bridge will be much appreciated by the people of the Pincher Creek district, a great many of whom have applied for building villa lots, and who will build early this summer. In high water this creek is a rapid mountain torrent. Last September two gentlemen from Cardston and the writer very nearly lost their lives here owing to the upsetting of a light wagon and several parties were held up for many days by the freshet.

THE KOOTENAY PASS.

A portion of the park is or was in the Pass where there is a trail that has been used by the Indians for many years. There is now a rough wagon road over the summit to British Columbia and Montana for an approximate distance of one hundred and twenty-five miles, with an elevation of 7,100 feet at the water-shed where there is a celebrated fishing place, Willed lake, found and called so by the writer many years ago. There is also splendid trout fishing in the Flathead river.

MINERALS AND METALS.

At many places close to this road petroleum seepages exist, and much money has been expended in the endeavour to find oil in paying quantities. Holes have been drilled to 1,700 feet. The Pincher Creek Oil Co. did some work on their claims last summer. Float copper is abundant. A claim just outside the old park limits has been prospected a little but so far only low grade ore. 10 per cent, has been found. Float cannel coal is found on the lake shores.

GAME.

This portion of the Rocky Mountains has always been celebrated for its game; larger sheep heads have been obtained in this vicinity than elsewhere and since the creation of this park and the strict enforcement of the regulations by the officers employed, the increase is notable. Several moose have been tracked and some seen. This winter, mountain lions and wolves have killed some deer but we hope to be able to exterminate the former in one way or another.

PATROL.

Constant patrols are made; indeed, they are highly necessary especially in summer when the danger from fire is very great owing to the prevailing high south winds and the large numbers of campers.

FUTURE REQUIREMENTS.

A fire-guard should be ploughed close to the base of the mountain and telephone lines established. These would greatly assist the Forest Rangers. I have just forwarded a long list of persons desirous of having a telephone established to the Chief Superintendent. A bridge or ferry over the Waterton River is urgently required and I beg to call your attention to the fact that there is no bridge here for forty miles although there are three on the Belly river in the same distance. The high water lasts from six weeks to two months during which time the river is unfordable; there can be no communication between shores except by rowboat; horses have to swim; several are drowned each year and three lives have been lost on the ford. A ferry could be put in easily but this ford is outside of the present park lines.

ENLARGEMENT OF THE PARK.

In conclusion I may add that the enlargement of this Park is greatly desired by the people of the district as also by all sportsmen here and on the United States side. The Campfire Club of America is very anxious to co-operate with any action taken for the protection of our fast disappearing game. There is a vast area here that seems to be useless for any other purpose.

I have the honour to be, sir,
Your obedient servant,
JOHN GEORGE BROWN,
Forest Ranger in charge Waterton Lake Park.

No. 7.

REPORT ON THE ST. LAWRENCE ISLAND PARKS.

Department of the Interior, Dominion Parks Branch,
Ottawa, April 1, 1912.

To the Commissioner of Dominion Parks,
Ottawa.

Sir,—I beg to submit my second annual report in connection with the St. Lawrence Islands Parks.

These parks, located as their title suggests, on the St. Lawrence river, constitute the only eastern reservation in the series of Dominion Parks, all the others lying in the far west. There are few points of comparison, beyond those of beauty and charm, between this little island reservation in the east and its vast sister reservations in the west. There are, however, many points of contrast as one recalls the large area of western parks, with their wealth of lakes, streams and mountain scenery and their forests of pine and spruce which afford sanctuary for almost every form of animal life incidental to the west. Yet each of these islands, though but a few acres in extent, fulfils the park idea as truly in its particular setting as the immense mountain reservations in the west; that is, they are places of public resort for out-door recreation, rest and pleasure. And to the hungry fisherman, canoeist, or launch party, the tired city dweller or the Sunday school excursion, excluded from other islands in the river by private ownership, these islands are a great convenience. They are situated at intervals over a stretch of thirty miles of river; most of them are beautifully wooded and display, within their limited areas, a suprisingly large variety of trees.

These islands have been made available to the public by the construction of picturesque pavilions, convenient wharfs, and landings and by furnishing a generous supply of tables, benches, stoves, &c. It has been the work of this Branch, during the past year, to maintain the equipment on each island in a serviceable condition and to keep the grounds clean and attractive. Sundry repairs have been executed at different points, and a wharf, suitable for skiffs and launches, has been built at Aubrey island. Open-air stoves have been built on three of the unimproved islands as a discouragement to promiscuous fire building, and additional stoves have been built on the other islands where necessary.

Only one of the islands is without a good growth of trees, namely, that at Mallorytown Landing, and this is because the island is nearly all rock. It is hoped, however, to have a number of trees planted there in the near future which in time will do much to relieve the somewhat barren aspect of the surroundings.

I made a trip of inspection over the islands last spring and arranged with the different guardians for carrying on the work.

The annually increasing number of visitors who frequent these islands is, perhaps, the best expression of public appreciation that can be desired.

Attached is a tabular statement giving certain information in connection with each island in the reservation.

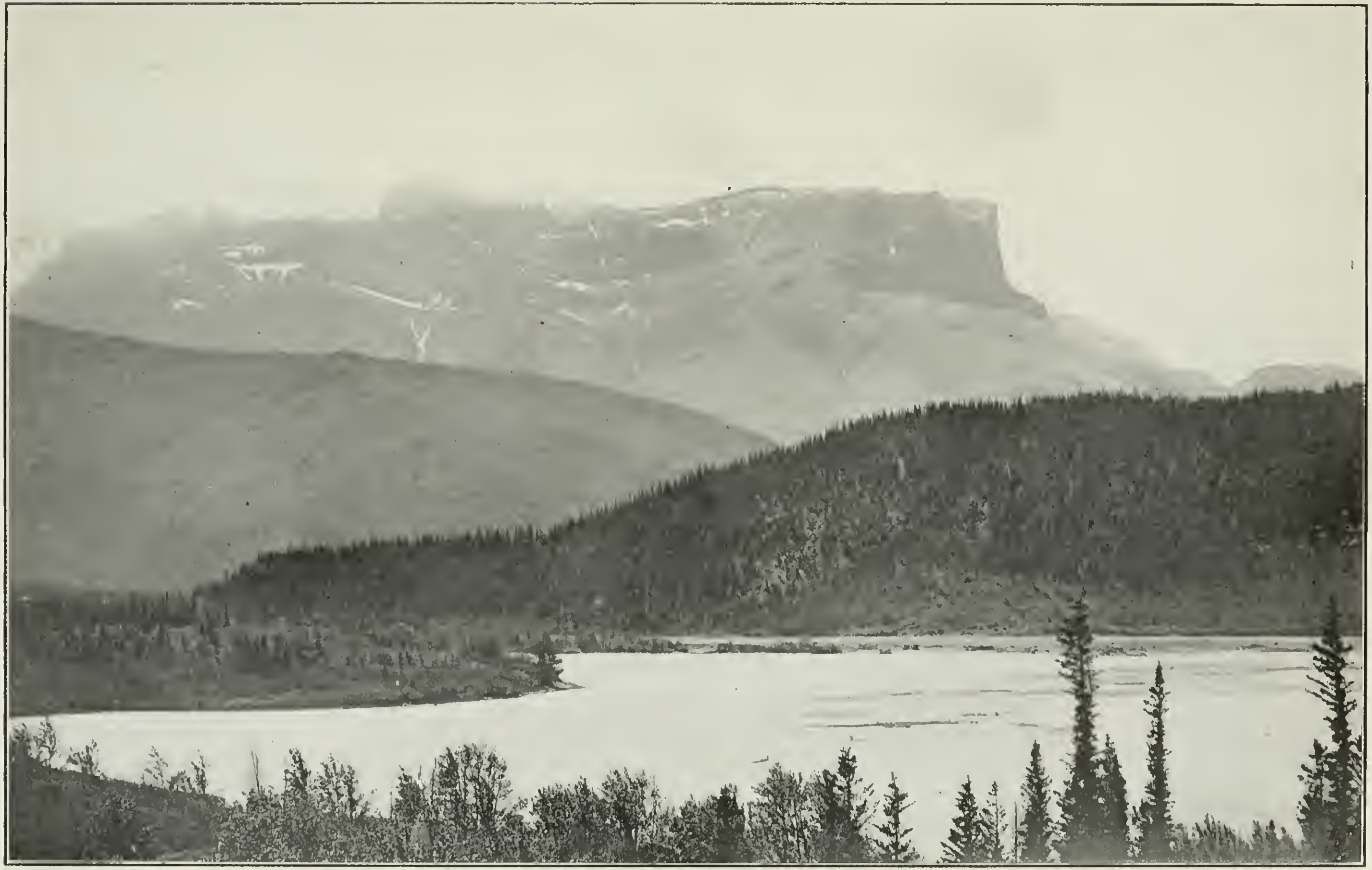
Your obedient servant,

FRED. H. BYSHE,

Superintendent.

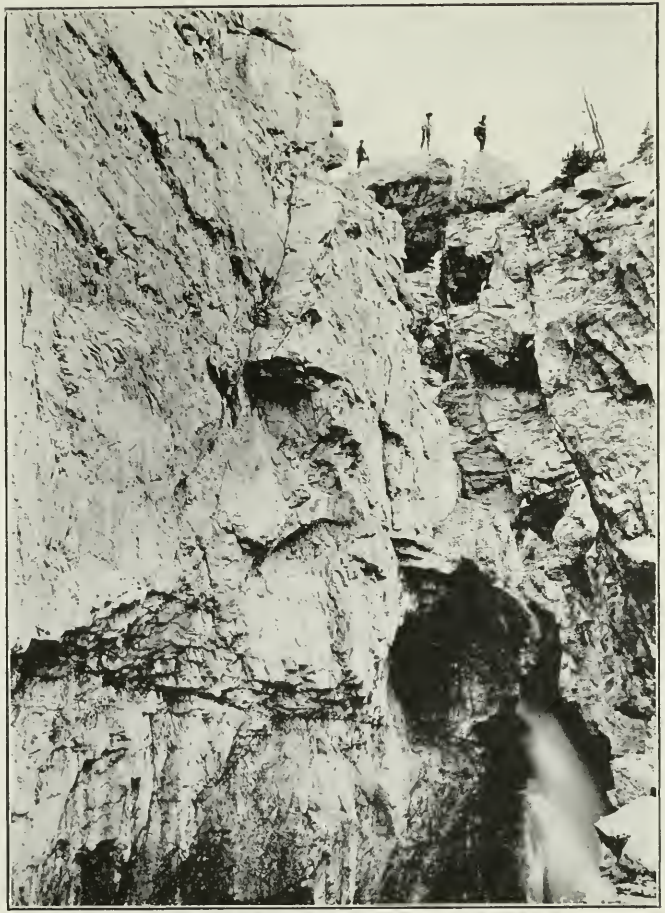
TABULAR statement in connection with the Thousand Island Park.

Name.	Area.	Location.	Nature of Improvements.
	Approximate.	Approximate.	
Aubrey	15 acres	2½ miles W. of Gananoque.	1 launch wharf, 1 pavilion (No. 9), 2 stoves, 2 outclosets, 4 tables, 2 garbage cans, 8 benches, (Marine light.)
Mermaid.	4 "	Close to Aubrey	
Beau Rivage	10 to 14 acres	2 miles W. of Gananoque.	Steamboat and skiff wharves, 1 pavilion (No. 1), 4 stoves, 2 outclosets, 4 tables, 14 benches, 2 garbage cans.
Gordon	16 to 20 "	2 miles S.E. of Gananoque	Steamboat and skiff wharves, 1 pavilion (No. 2), 3 stoves, 2 outclosets, 4 tables, 10 benches, 2 garbage cans.
Camelot	25 "	3 miles S.E. of Gananoque.	1 stove.
Endymion	10 "	3 miles S.E. of Gananoque.	1 stove.
Georgina.	23 "	9½ miles E. of Gananoque.	On W. end steamboat and skiff wharves, 1 pavilion (No. 3), 2 stoves 2 closets, 4 tables, 12 benches, 2 garbage cans. On E. end skiff wharf 3 stoves, 2 closets, 4 tables, 14 benches, 2 garbage cans.
Constance	7 "	Close to Georgina	1 stove.
Grenadier	5·1 "	West end of Grenadier Island, near Rockport.	Steamboat wharf, 1 pavilion (No. 5), 2 stoves, 2 closets, 4 tables, 12 benches, 2 garbage cans.
Mallorytown Landing.	4 "	12 miles W. Brockville (part mainland)	Steamboat wharf, 1 pavilion (No. 6), 1 stove, 2 closets, 2 tables, 7 benches, 1 garbage can.
Adelaide	11 "	1¼ miles S. of Mallorytown Landing	
Stovin	5 "	2½ miles W. of Brockville.	Steamboat and skiff wharves, 2 pavilions (Nos. 7 and 8), 5 stoves, 4 closets, 6 tables, 16 benches, 6 garbage cans.



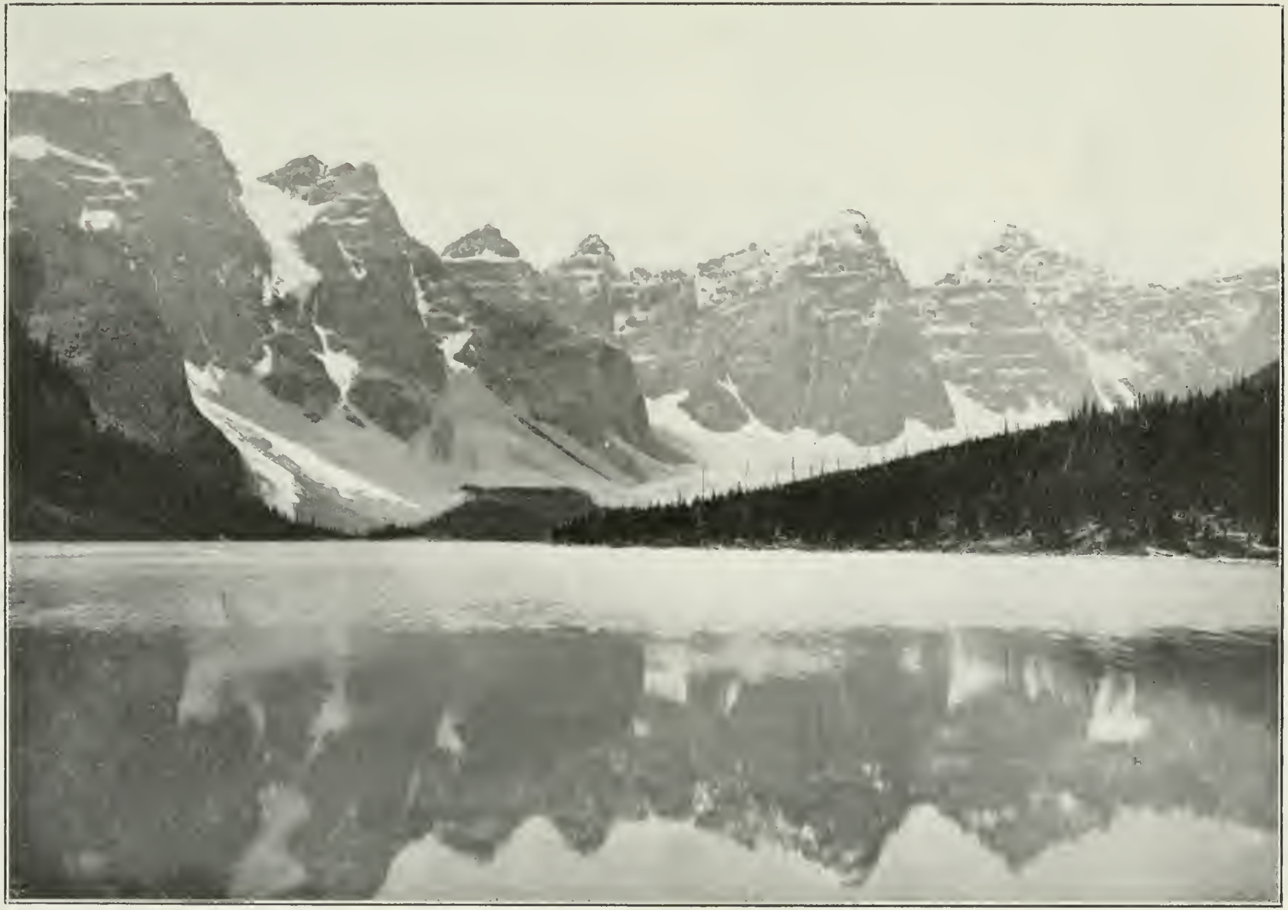
Roche Miette, Athabaska River in foreground, Jasper Park.

Golf Links, Banff, Rocky Mountains Park.

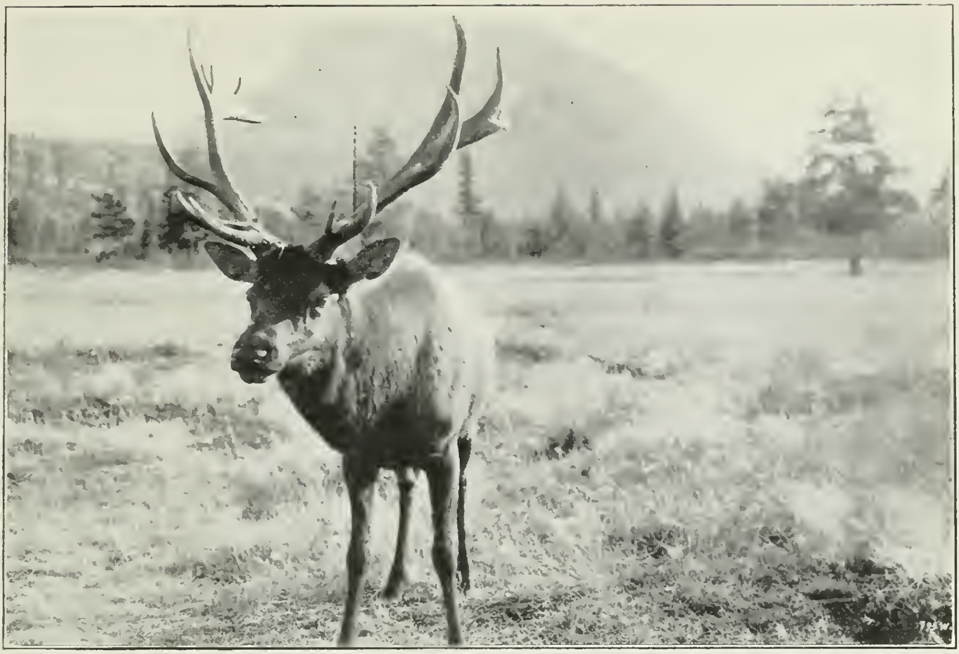


On Pulpit Peak, Rocky Mountains Park.

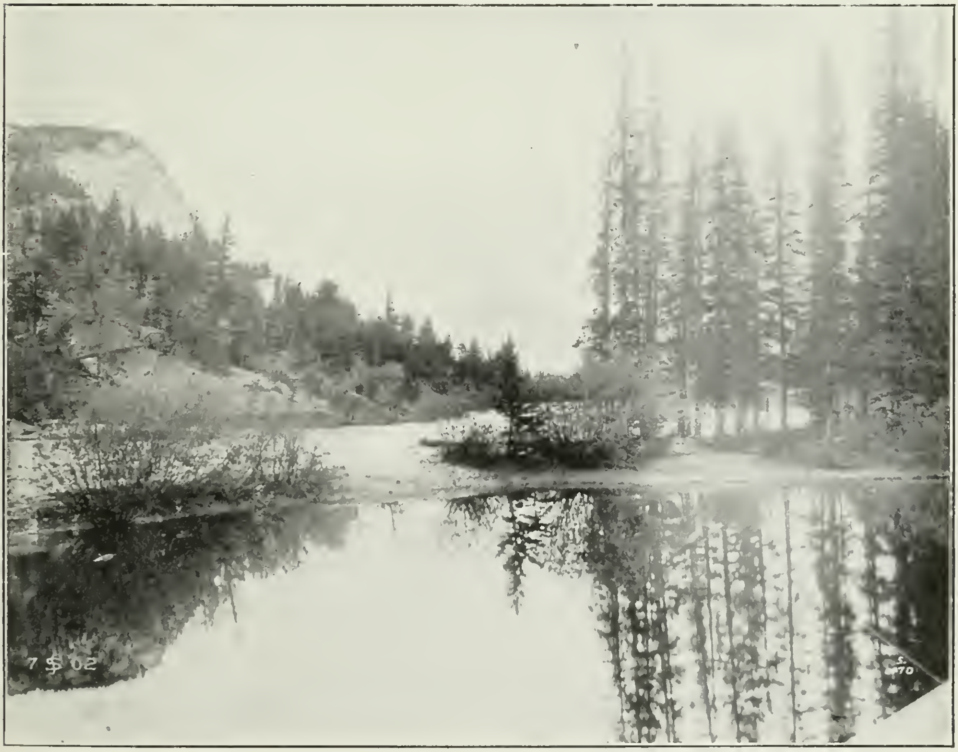
Hoodoos in Hoodoo Valley, Yoho Park.



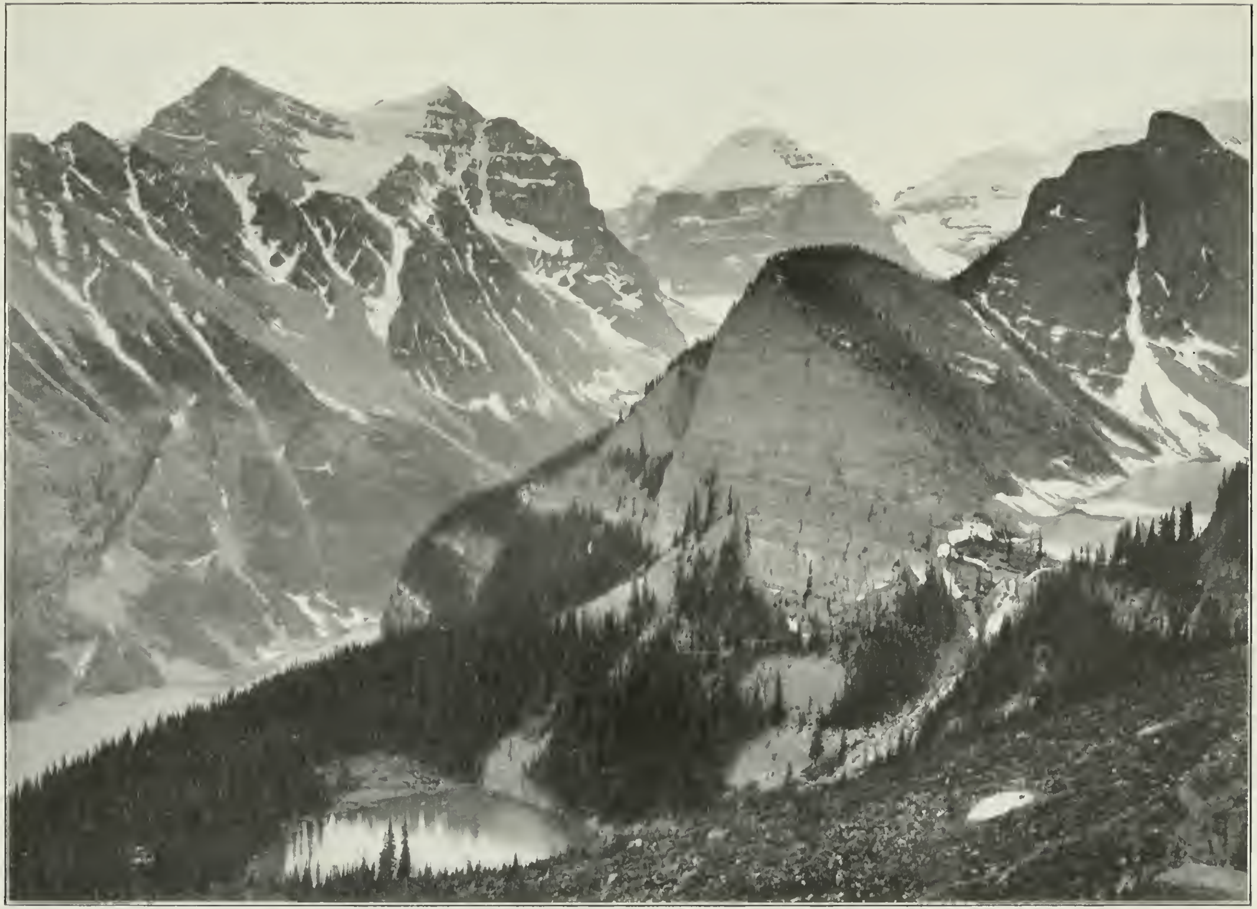
Moraine Lake. Valley of the Ten Peaks, near Laggan.



Elk in Banff Paddock.



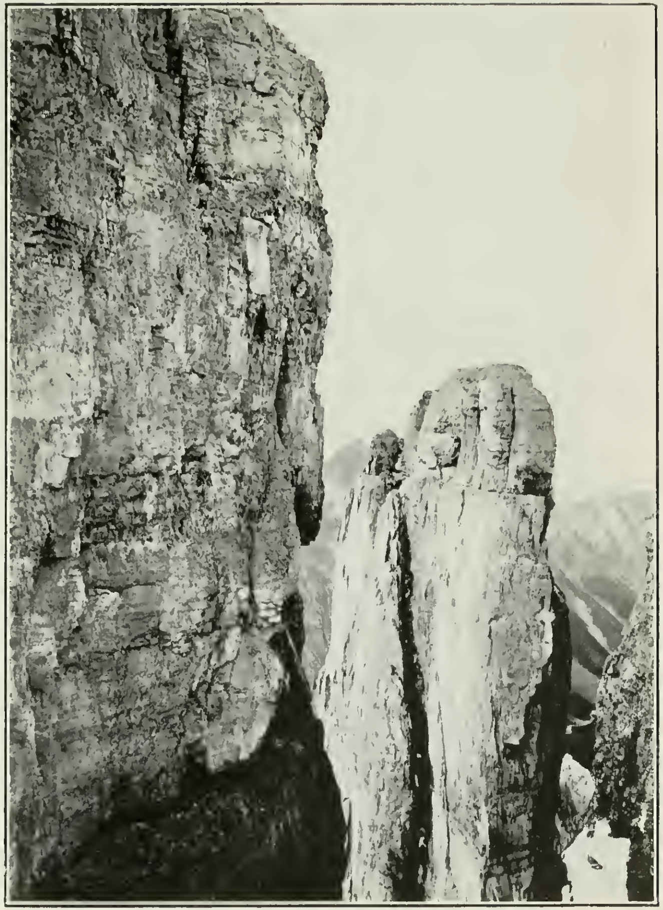
Bow River, from near junction of Spray, Rocky Mountains Park.



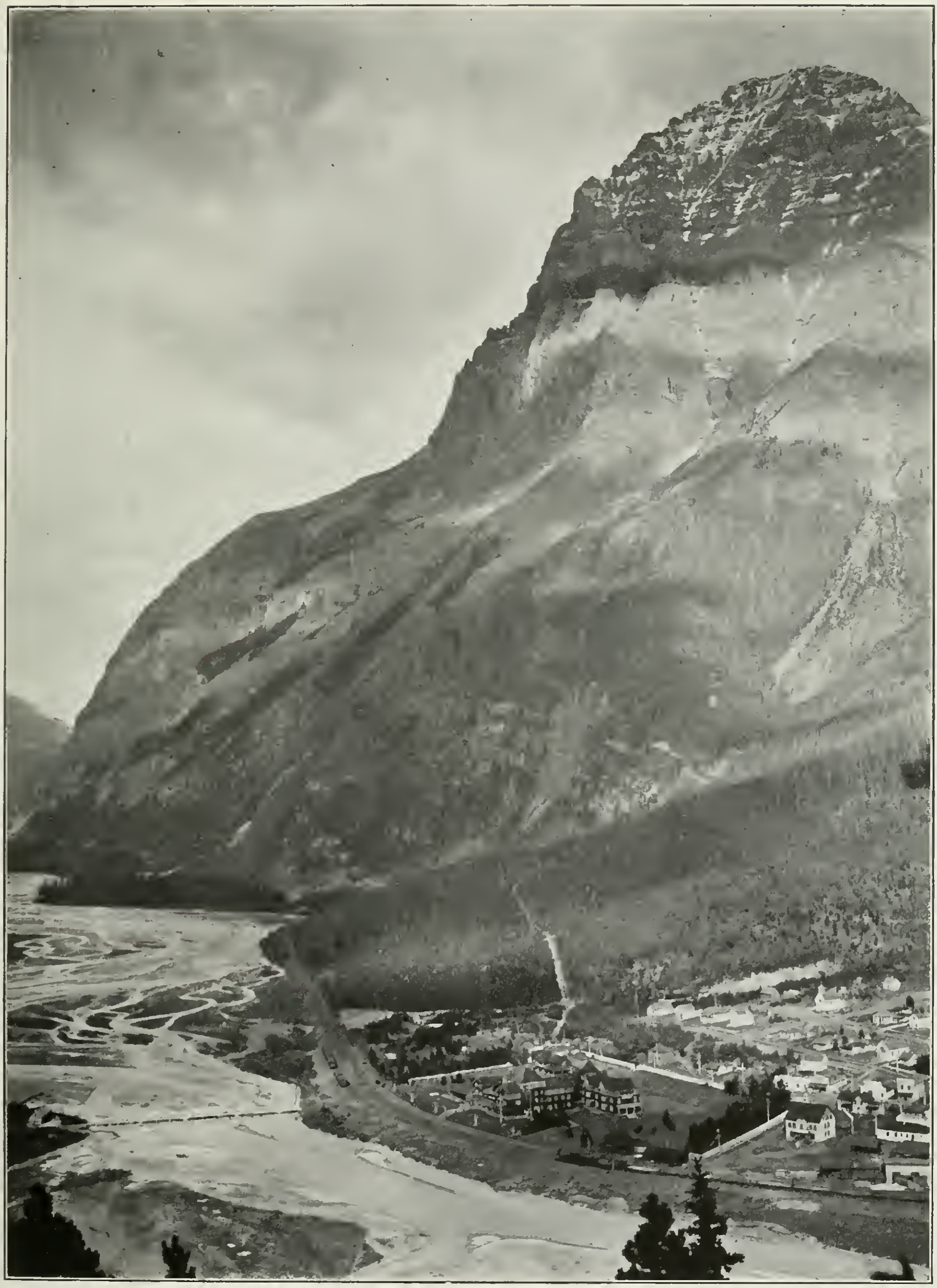
Lake Agnes, Mirror Lake and Lake Louise, near Laggan, Rocky Mountains Park.

Lake Louise Chalet near Laggan, Alta.

Summit of Mt. Hector, Rocky Mountains Park.



On Eiffel Mountain, Rocky Mountains Park.



Field, B.C., Yoho Park.

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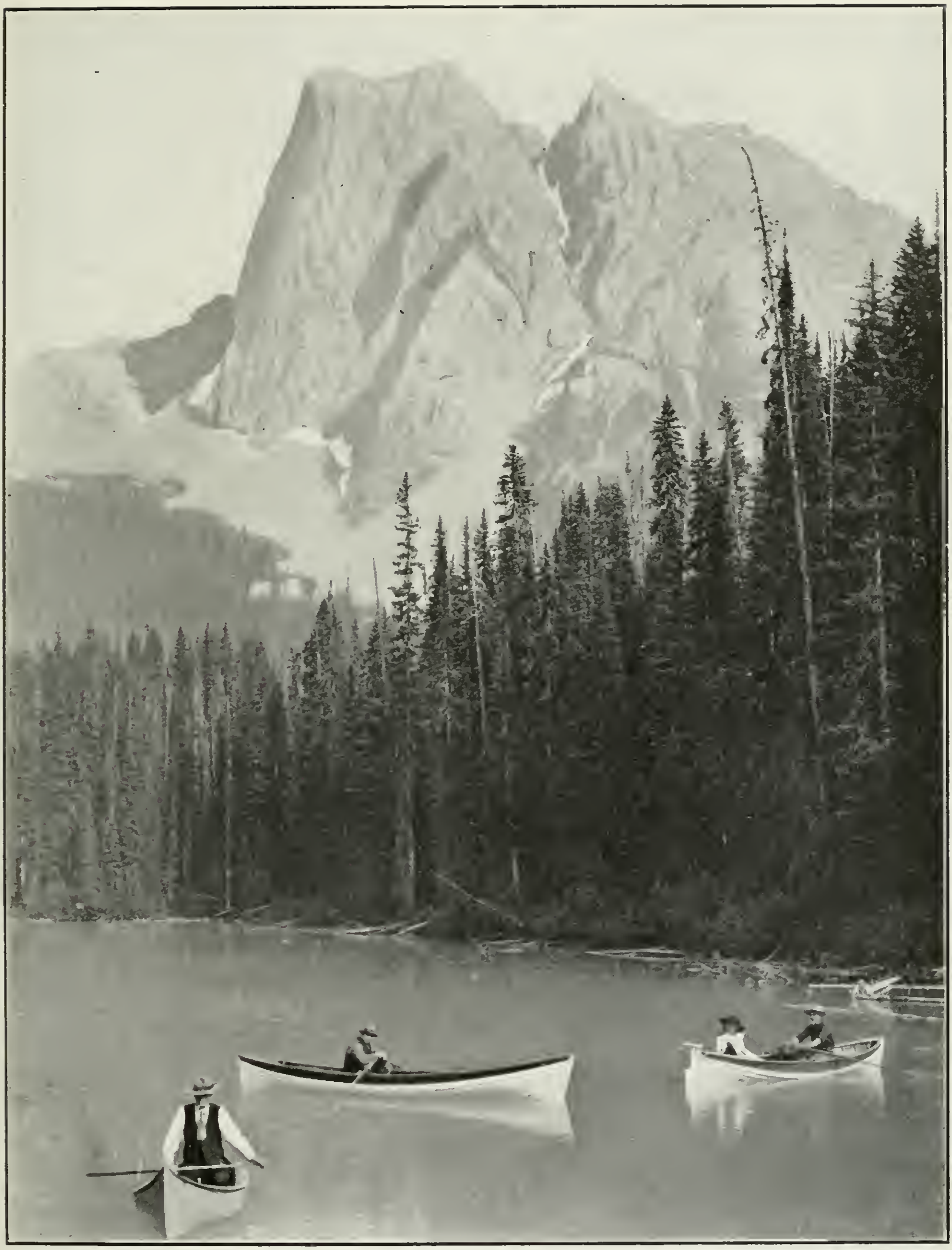
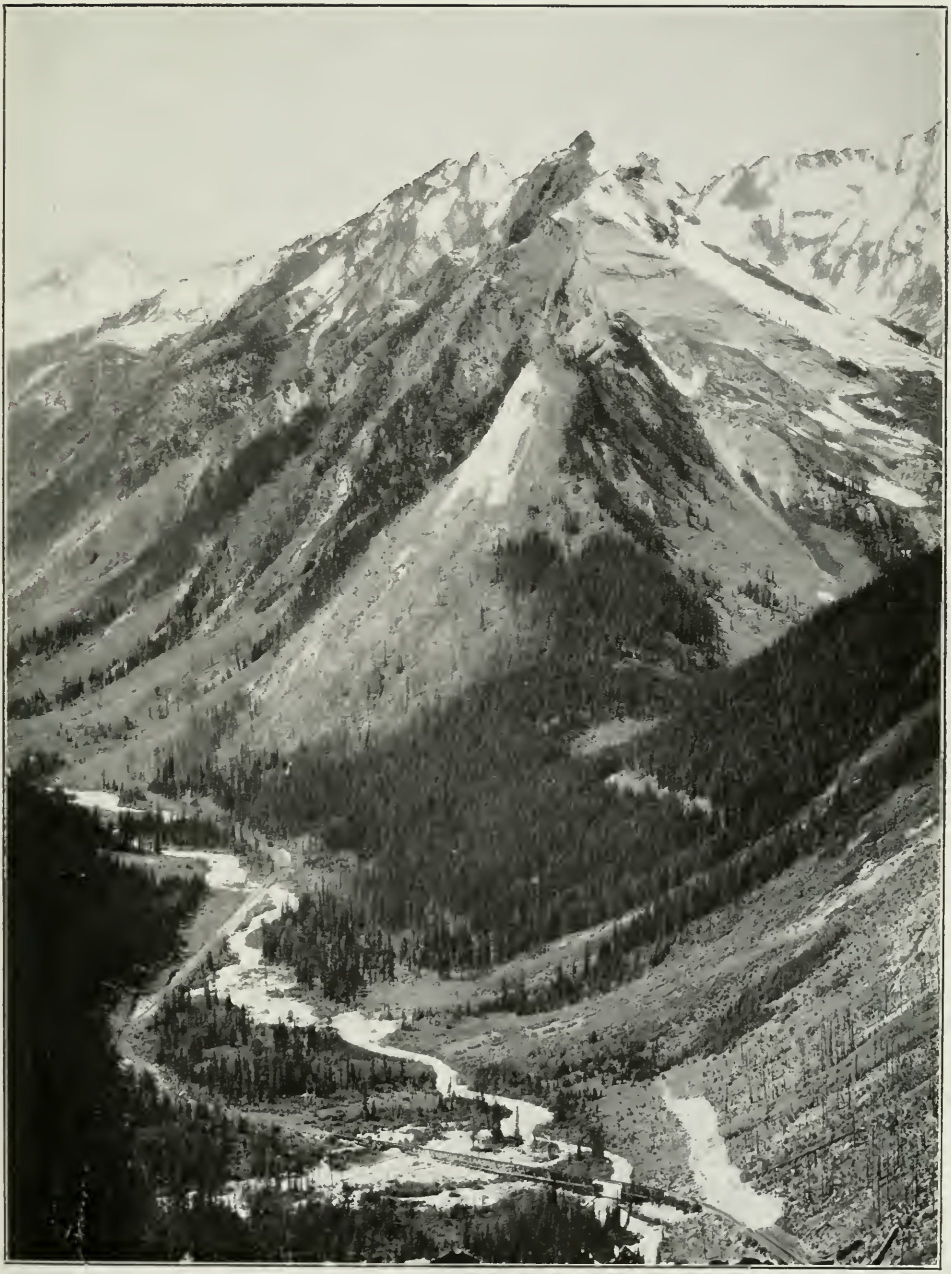
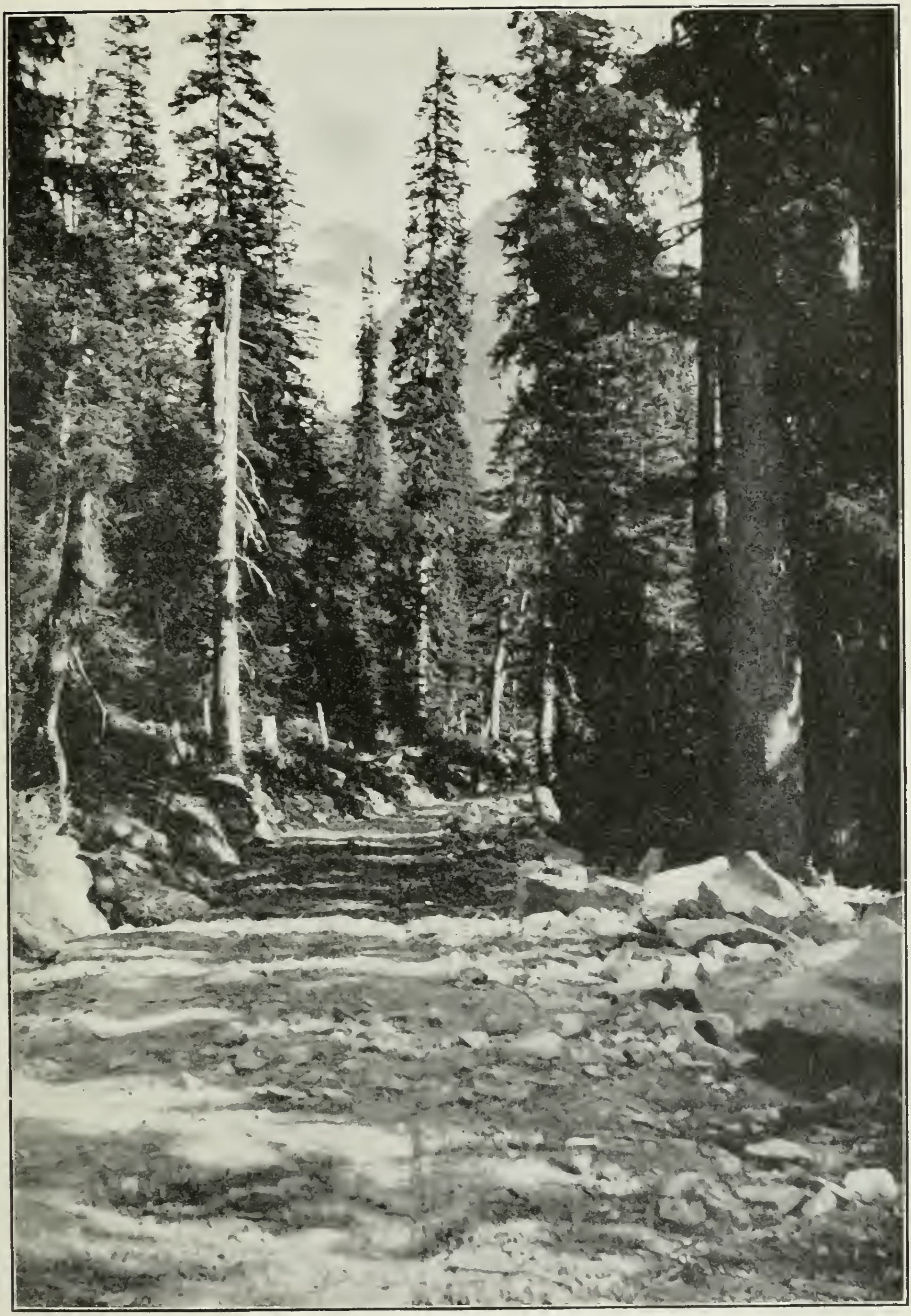


Emerald Lake and Mt. Burgess, Yoho Park.



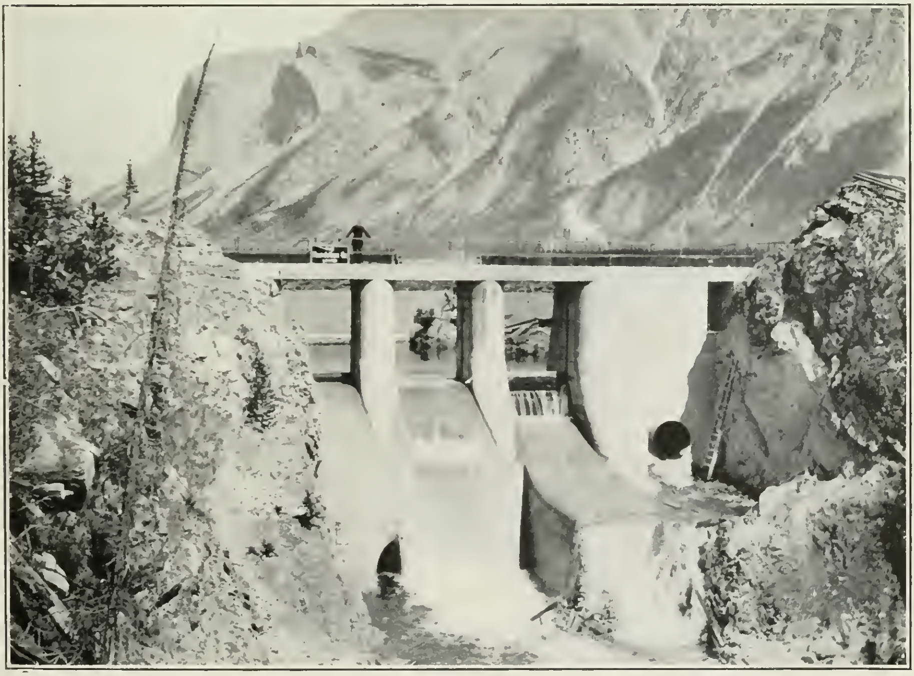
Valley of the Illecillewaet, Glacier Park.



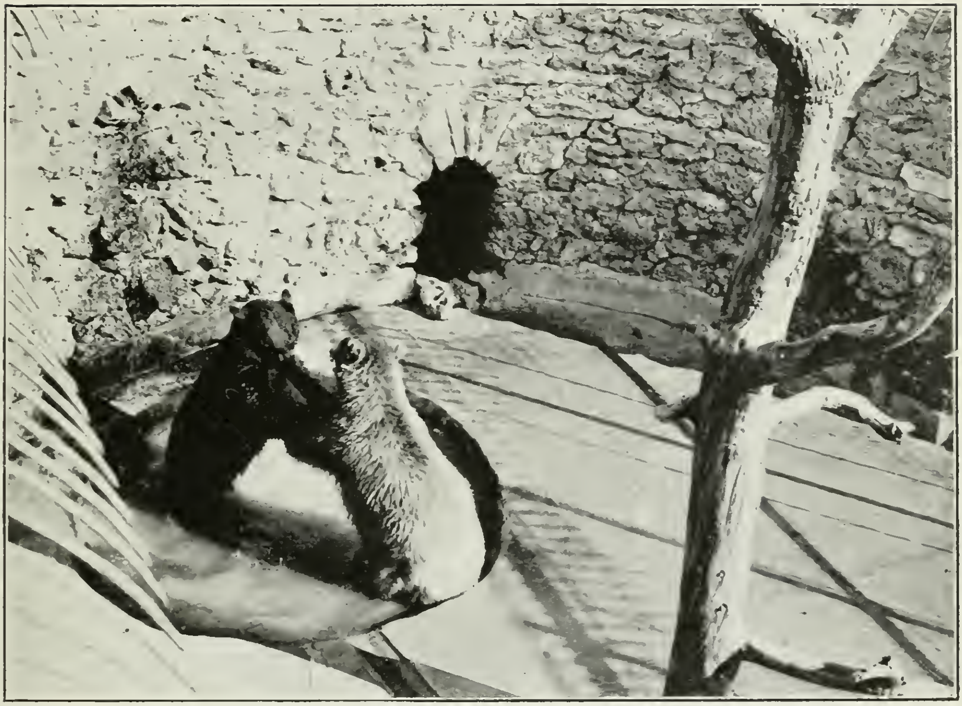
On the way to the Nakimu Caves, Glacier Park.

“ Monarchs of the Plains.’

Mt. Robson in winter. Height 13,700 ft.



Minnewanka Dam, Lake Minnewanka, showing Thimble for Government Power Reservation on lower right.



Bear Cubs in Banff Zoo.

Lake O'Hara, Yoho Park.

PART VI

FORESTRY AND IRRIGATION

FORESTRY AND IRRIGATION

No. 1.

REPORT OF THE DIRECTOR OF FORESTRY.

Department of the Interior,
Forestry Branch,
Ottawa, April 1, 1912.

W. W. Cory, Esq., C.M.G.,
Deputy Minister of the Interior,
Ottawa, Ont.

Sir,—I have the honour to submit the report of the work of the Forestry and Irrigation Branch for the year 1911-12, and also the reports of the officials in charge of the different divisions. During the year the administration of the Dominion Parks was withdrawn from this branch and a separate branch established for that purpose, and, therefore, the parks will be separately reported upon.

STAFF.

Messrs. T. W. Dwight, D. R. Cameron, S. S. Sadler and E. G. McDougall, graduates of the School of Forestry of the University of Toronto; H. C. Kinghorn, a graduate of the School of Forestry of the University of New Brunswick ; F. W. Beard, a graduate in forestry of the University of Minnesota, were appointed to the permanent staff for forestry work at the beginning of the year.

Mr. W. N. Millar, a graduate in forestry of Yale University, who has had a very successful administrative career in the Forest Service of the United States, has been appointed to organize the administration of the Rocky Mountains Forest Reserve.

Mr. J. T. G. Whyte, who was fire guardian at Split Lake on the proposed route of the Hudson Bay Railway, was unfortunately drowned in July by the swamping of his canoe while in the discharge of his duties as fire-ranger. Mr. Whyte was a forest ranger of large experience, and was faithful and conscientious in the discharge of his duties according to the evidence of those who lived in that vicinity, including the missionary, Rev. Mr. Fox.

The staff of the Commissioner of Irrigation has been considerably enlarged. The staff at Calgary now consists of twenty-two engineers and seven clerks and draughtsmen.

Mr. W. G. Bligh, Member of the Institute of Civil Engineers of Great Britain, has been placed in charge of the inspection of the irrigation works of the Canadian Pacific Railway Company, under the supervision of the Commissioner of Irrigation, and is already at work examining the plans and arranging for the actual field work which will be taken up as soon as the weather permits.

Unfortunately the staff at the head office at Ottawa has not been sufficiently enlarged to handle the increasing volume of business that is necessitated by the expansion of the work in the field, and has made it necessary to use members of the outside staff for work at Ottawa for such time as it was possible to do so. For efficient administration the force at the head office will need to be considerably strengthened. The proper direction of the work of the field force and the recording of the information obtained and of the business transacted are in the best public interest and should not be considered of minor importance.

FOREST ADMINISTRATION.

The Forestry Division of this branch covers a variety of work, all of which requires development as rapidly as it can be overtaken.

Up to the present time one difficulty in the way of rapid development has been the lack in Canada of men who have had technical training in forestry. Little progress can be made without a fair proportion of men in the service who have had the advantage of the study of forestry methods from the scientific standpoint, and who, therefore, understand the lines upon which advancement must be made and the ultimate purposes which the administration must have in view. The difficulty is now being overcome by the forest schools established in the Dominion, which are graduating each year a number of men who should fill this gap in the administration. The Forestry Branch of this department has so far furnished the chief opening for employment of these graduates, and there are now on the staff five graduates from the Forest School of the University of Toronto, three graduates of the Forest School of the University of New Brunswick, and seven graduates of Foreign Schools, most of them, however, Canadians who were employed before the Forest Schools of Canada were established.

The exploration of the public domain in order to ascertain the extent and present condition of the forests and to hold permanently in national forests the non-agricultural lands is an important side of the work, and a first necessary step for the establishment of a permanent forest policy. Consequently six parties were detailed for this work during the past year in Keewatin, Northern Manitoba and Saskatchewan, and in Alberta and the Railway Belt in British Columbia, and these have added much to our knowledge of the forests, and defined extensive additional areas that should be held for forest purposes.

The protection of the vast extent of northern forest is a task of great magnitude. The belt of land, more or less forested, stretching from Hudson Bay to the Rocky Mountains covers a distance of 1,500 miles from east to west, and from 300 to 700 miles from north to south, and, with travel, railway construction and settlement steadily working into it from all directions, the danger of fire is great and constant. On the whole, the staff of rangers patrolling in these districts is of a good class, but the number so far employed, 129, is utterly inadequate to the task when the season is at all dangerous.

One of the weaknesses of the fire-ranging work outside of the reserves has been the lack of proper inspection to determine what districts should be patrolled, and how the patrols of the rangers should be arranged, and to ensure that the patrol is being carried out faithfully. I have previously made representations in regard to this phase of the administration, and further experience has only confirmed my conclusions in regard to the necessity for inspection. I am satisfied that a competent system of inspection would result in a much more effective fire-ranging organization and in a more economical handling of the work. There is yet too much of haphazard in the manner in which the fire patrol is administered.

The lumbermen in the West have not heretofore taken as live an interest in the protection of the timber from fire as the investments that they have in timber limits would seem to justify. A more active participation by the lumbermen in the system of protection should lead to better results, and, without their co-operation, it is difficult for the department to accomplish all that should be done. A scheme for co-operation by the lumbermen in this work should be heartily welcomed.

The organization of the permanent forest reserves so as to make them fire-proof and to provide proper management is work that requires a good permanent staff and a system of permanent improvements, such as forest-ranger stations, trails, roads, bridges, telephone lines, &c. In my report of last year I called attention to the necessity for choosing the forest-ranger staff on a basis of special qualifications for the work, and outlined the qualifications necessary. As the forest-ranger staff is the groundwork of all the organization for handling the reserves, the choice of the right kind of men is a factor of the greatest moment. The improvement work above referred to, as required on the reserves, is necessary if there is to be an effective protection and management, and, as all this work is yet to be done, it will be seen that there must be a large initial expenditure which cannot be expected to be returned by the forest immediately. The work on permanent improvements is in fact a capital expenditure and should be considered as such. A proper system of roads, trails, buildings, &c., throughout the reserves will cost a large amount of money, the incidence of which should be distributed through a series of years. These works, once done, will require a comparatively small expenditure for maintenance in addition to such work as may be done by the permanent ranger staff. So long, however, as this work remains undone, the forests are exposed to danger which cannot be coped with in seasons of light rainfall, and which renders much of the expenditure that is being made for fire patrol finally nugatory, as the history of the dry years so eloquently testifies.

It must be expected, therefore, that the expenditure on the forests for a considerable period will exceed the revenues. A permanent policy, in the present condition of our forests, cannot be worked out on any other expectation. The waste of years of unchecked fires cannot be repaired in a day. When the fire danger has been eliminated and proper system of cutting timber introduced, the condition of the forests will steadily improve, and finally will reach the stage where a sustained annual yield can be obtained which will give revenue sufficient to cover the costs of administration and furnish as reasonable a profit as a government would be expected to obtain.

The collection of statistics in regard to forest products is an important corollary to the other work of this branch. Previous to the starting of this work by this branch in 1908, there were no reliable records of the yield of the forests of Canada or of the value of the forest as a producer of wealth and a support of native industries. These reports, combined with the export and import returns of the Department of Customs, have revealed our strength and our weakness. They show an annual value of Canadian forest products of $166,000,000, second only to the agricultural production; that, as far as pulpwood is concerned, Canada is the greatest producer and supplies not only Canadian requirements but a large part of those of the United States, but that as far as the more valuable woods are concerned, especially hardwoods, the supply is steadily approaching the point of exhaustion and in most hardwoods has already practically reached it. A strengthening of the staff handling this work would make the reports still more valuable and useful.

A further development that would properly round out the natural work of the Forestry Division of this branch would be the investigation of waste in the forest and in the manufacture of wood and experimentation in new processes to prevent waste. Unquestionably one of the developments in the direction of economy must be in the elimination of waste outside the forest as well as inside. The drain upon our wood supplies will become so great that they must not only be protected when standing in the forest, but must be followed all along the line of use and made to spread as far as possible both in quantity and time. The work of this branch cannot be considered as complete until it can follow the products of the forest through this whole cycle and assist in economizing them to the end. Provision for investigations on the lines indicated should be made without delay.

TREE PLANTING.

That the interest in the planting of trees on farms on the prairies of the West has been well sustained is shown by the number of applicants who received trees, namely, 3,285, as compared with 3,173 of the previous year. The number of applicants to whom trees will be sent in the spring of 1912 is 3,618, and the number of trees to be distributed 2,729,135, as compared with 2,636,100 in the previous year. One good feature of the class of applications which is now being received is that, as a rule, the land is being well prepared in accordance with the requirements of the department, before applications are submitted. The educational work in this respect is, therefore, beginning to have effect.

The office work necessary in connection with the handling of the correspondence, in the preparing of planting plans and distribution lists, is becoming larger as the work develops, and it would seem almost necessary that in a very short time better office accommodation than that which is now supplied should be provided at Indian Head. At present the offices are in the second story of the business block, and the records would not be very safe in case of fire. In other ways the space provided is not very satisfactory, and it might be well to consider the question of erecting a special office building for the accommodation of this work, which will undoubtedly continue to develop for a good many years to come.

Although the present forest nursery station was enlarged recently by the addition of a quarter section, the land is somewhat broken and not very well suited for the growing of nursery stock, consequently it is not likely that an output greater than three million to three and a half million trees can be provided at that place. As the demand for trees continues to increase, it was decided that it was necessary to provide additional nursery accommodation. In deciding where additional nursery accommodation should be obtained the factors to be considered were: First, suitable climatic conditions; second, facilities for shipping, and third, a labour market. In order to grow trees in the nursery so that they will be satisfactory under any climatic conditions, it is best to grow them without having to apply water for irrigation, and, therefore, sufficient rainfall to water the nurseries naturally would be required. A district which was free from hail storms was also desirable, as such storms would do a great deal of damage to a forest nursery. As millions of trees are shipped out at one time in the spring and have to be delivered within a short period, if they are to be planted successfully, shipping facilities are of the greatest consequence. A good supply of labour is also a necessity, as the nature of the forest nursery work requires that at special periods when stock is being prepared and heeled in in the fall and when it is being shipped in the spring, an additional supply of labour should be easily available. On considering the whole question it was finally decided that these conditions would probably be best met in the vicinity of Saskatoon, and arrangements were finally made for the purchase of lands at that place. The lands selected were the north-east quarter of section 1, and the south-east quarter of section 12, township 37, range 5 west of the 3rd meridian. This land is a light loamy soil, is level and practically all of it can be used for the growing of trees except a few acres in one corner which are somewhat stony. This portion can be used for pasture purposes and for the location of buildings. It is expected that this nursery will be in order inside of two years so that stock can be obtained from it to provide for the increasing demand.

As soon as a stock of coniferous trees could be worked up, it was decided to arrange for their distribution, but as it would not be possible at any time to provide a very large stock, it was thought better to make a charge for them instead of distributing them free as has been done with species of deciduous trees. In spite of this charge the demand for coniferous trees has been great, and all that were provided have been applied for.

FIRE-RANGING.

The season of 1911 was generally wet throughout the western provinces so that, fortunately, after the first few weeks in the spring, little difficulty was experienced. In British Columbia only was the danger of fire continuous throughout the summer.

In the dry weather of the spring there were several serious fires. One occurred at Mafeking on the line of the Canadian Northern Railway, in the Province of Manitoba, and caused damage to timber limits amounting to probably fifty million feet. There is considerable evidence to show that the fire started from the railway, although the evidence is not conclusive, and it is also stated that the fire was started from the lumbering operations.

There were several serious fires also in the vicinity of Prince Albert and several of the lumbering firms lost heavily. The merchantable timber killed by the fires in that district is estimated at one hundred and ten million feet board measure, of which seventy-two million feet have been taken out and manufactured during the past year. At the best, however, this still leaves a heavy loss to the lumbermen, and has made necessary the throwing of a large quantity of timber on the market at a time when good business management would not have determined on such a course.

Three of the most destructive fires came from settlements, and one may have been due to the railway. In spite of all the warnings that are given in regard to the danger of fire there is a great deal of carelessness in the handling of it and apparently a long process of education is yet necessary before there will be such an appreciation of the danger as to give any assurance of security.

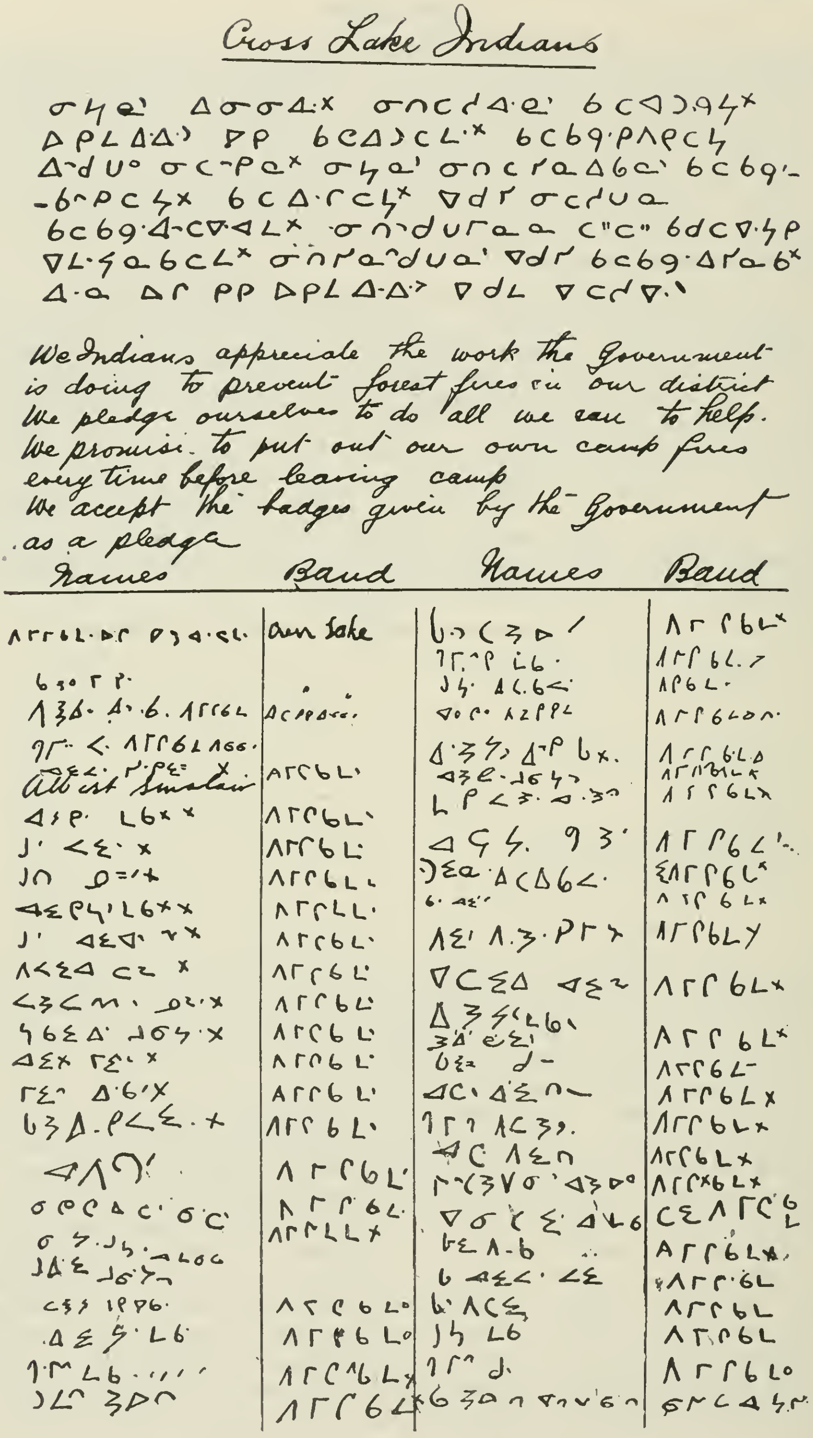
The number of fires which occurred and their causes are as follows:—

Railways—under construction	33	
Railways—in operation	84	
	—	117
Hunters and travellers		115
Clearing land		55
Lightning		26
Indians		16
Lumbering operations		7
Cause unknown		102
Total		438

The number of fire-rangers employed was 129, distributed as follows: British Columbia, 46; Edmonton, 28, including 9 along line of construction of Grand Trunk Pacific and Canadian Northern; Athabaska and Peace Rivers, 18; Battleford, 4; Prince Albert, 24; Eastern Manitoba, 4; Keewatin, 5.

In the Keewatin district north of Lake Winnipeg a chief ranger was located at Norway House and one at Split Lake, these being specially required on account of the increase of travel by the canoe routes through this district consequent on the survey and proposed construction of the Hudson Bay Railway. The population of the district are mostly Indians and freighters and canoemen for the Hudson's Bay Company and others. Along the canoe routes the timber has been burned, leaving only islands of good timber among vast stretches of burned or immature forest. Special efforts have been made to interest the Indians in the prevention of fires and a special fire ranger's badge was made for them. The efforts of the rangers are having a good effect, as will be seen by the following extract from the report of the chief ranger, J. T. Blackford, dated at Norway House, the 10th September, 1911:—

‘With few exceptions the Indians have all been very careful this summer. Not a single report of fire has been received by me. On my way to Split Lake I was eye-witness to one of which I will relate later on in this letter.



Cross Lake Indians

ᓂᔭᓈᐣ ᐃᓂᓂᐚᕽ ᓂᑎᑕᑯᐋᐧᓀᐣ ᑲᑕᐊᑐᐧᑫᔭᕽ
ᐅᑭᒪᐃᐧᐃᐧᐠ ᐁᑭ ᑲᑕᐃᑐᑕᒪᐧᕽ ᑲᑕᑲᑫᐧᑭᐱᑫᑕᔭ
ᐃᐢᑯᑌᐤ ᓂᑕᐢᑭᓇᕽ ᓂᔭᓇᐣ ᓂᑎᑕᓯᓇᐃᑲᓇᐣ ᑲᑕᑲᑫᐧ-
-ᑲᐢᑭᑕᔭᕽ ᑲᑕᐃᐧᒋᑕᔭᕽ ᐁᑯᓯ ᓂᑕᑯᑌᓇ
ᑲᑕᑲᑫᐧᐊᐢᑕᐁᐧᐊᒪᕽ ᓂᑎᐢᑯᑌᒥᓇᓇ ᑕᐦᑕᐦ ᑲᑯᑕᐁᐧᔭᑭ
ᐁᒪᐧᔪᓇᑲᑕᒪᕽ ᓂᑎᓯᓇᐢᑯᑌᓇᐣ ᐁᑯᓯ ᑲᑕᑲᑫᐧᐃᓯᓇᑲᕽ
ᐃᐧᓇ ᐅᒋ ᑭᑭ ᐅᑭᒪᐃᐧᐃᐧᐟ ᐁᑯᒪ ᐁᑕᑯᐁᐧᐠ

We Indians appreciate the work the Government is doing to prevent forest fires in our district. We pledge ourselves to do all we can to help. We promise to put out our own camp fires every time before leaving camp. We accept the badges given by the Government as a pledge

Names	Band	Names	Band
ᐱᒥᒋᑲᒪᐧᐅᒋ ᑭᑐᐊᐧᑕᒪᐧ	Cross Lake	ᑲ·ᑐ ᑕƷᐅ'	ᐱᒥᒋᑲᒪᕽ
ᑲᔾᐤ ᒥᑭ·		ᑫᒥ·ᐢᑭ ᒐᑲ·	ᐱᒥᒋᑲᒪ·
ᐱƷᑳ· ᐋᐧ·ᑲ· ᐱᒥᒋᑲᒪ	ᐃᑕᑭᐅᐃᐧᐠ	ᒍᔭ· ᐃᑕ·ᑲᐸ	ᐱᑭᑲᒪ·
ᑫᒥ ᐸ· ᐱᒥᒋᑲᒪᐱᑲᑲ·		ᐁᐅᑭ· ᐱᒣᑭᑭᒪ	ᐱᒥᑭᑲᒪᐅᐢ
ᐊΣᒪ· ᒥ·ᑭΣ ᕽ Albert Sinclair	ᐱᒥᒋᑲᒪ·	ᐃ·Ʒᔭ' ᐃᐢᑭ ᑲᕽ	ᐱᒥᒋᑲ·ᒪᐃ
ᐊᔾᑭ· ᒪᑲᕽ	ᐱᒥᒋᑲᒪᐠ	ᐊƷᑫ·ᒍᑲᔭ	ᐱᒥᒋᑲᒪᕽ
ᒍ' ᐸΣ· ᕽ	ᐱᒥᒋᑲᒫ	ᒪᑭᐸƷ· ᐊ·Ʒᐤ	ᐱᒥᒋᑲᒪᕽ
ᒍᑎ ᑫ=ᐟ	ᐱᒥᒋᑲᒪᐠ	ᐊᕋᔭ· ᑫƷ'	ᐱᒥᑭᑲᒪ'
ᐊΣᑭᔭ'ᒪᑲᕽ	ᐱᒥᒋᒪᒪ·	ᑐΣᓇ·ᐃᑕᐃᑲᐸ·	Σᐱᒥᑭᑲᒪᕽ
ᒍ' ᐊΣᐊᐧ ᕽ	ᐱᒥᒋᑲᒪ·	ᑲ· ᐊΣ'	ᐱᒥᑭᑲᒪᕽ
ᐱᐸΣᐊ ᑕᒣ ᕽ	ᐱᒥᒋᑲᒫ	ᐱΣ' ᐱ·Ʒ·ᑭᒥᕽ	ᐱᒥᑭᑲᒪᕽ
ᐸƷᐸᒪ· ᑫᒣ·ᕽ	ᐱᒥᒋᑲᒫ	ᐁᑕΣᐃ ᐊΣ	ᐱᒥᒋᑲᒪᕽ
ᔭᑲΣᐃ· ᒍᓂᔭ·ᕽ	ᐱᒥᒋᑲᒫ	ᐃƷᔭ'ᒪᑲ' Ʒᐃ' ᐁΣ'	ᐱᒥᒋᑲᒪᕽ
ᐊΣᕽ ᒥΣ· ᕽ	ᐱᒥᑎᑲᒫ	ᑲΣ ᑯ-	ᐱᒥᒋᑲᒪ-
ᒥΣᐢ ᐃ·ᑲ'ᕽ	ᐱᒥᒋᑲᒫ	ᐊᑕ' ᐃΣᑎ	ᐱᒥᒋᑲᒪᕽ
ᑲƷᐃ·ᑭᐸΣ·ᕽ	ᐱᒥᒋᑲᒪ·	ᑫᒥᑫ ᐱᑕƷ·	ᐱᒥᒋᑲᒪᕽ
ᐊᐱᑎ'	ᐱᒥᒋᑲᒪ'	ᐊᑕ ᐱΣᑎ	ᐱᒥᒋᑲᒪᕽ
ᓂᑭᑭᐃᑕ' ᓂᑕ	ᐱᒥᒋᑲᒪ·	ᒥᐢᑕƷᐯᓂ' ᐊƷᐅᐤ	ᐱᒥᒋᕽᑲᒪᕽ
ᓂ ᔭ·ᒍᔭ· ᐊᒪᓂᑲ	ᐱᒥᒋᒪᒪᕽ	ᐁᓂ ᑕ Σ ᐃᒪᑲ	ᑕΣᐱᒥᑕᑲᒪ
ᒍᐃ·Σ ᒍᓂᔭᒣ		ᑲΣ ᐱ-ᑲ	ᐱᒥᒋᑲᒪᕽ
		ᑲ ᐊΣᐸ· ᐸΣ	ᐱᒥᒋ·ᑲᒪ
ᑕΣᔾ ᐃᑭᐁᑲ·	ᐱᒥᑭᑲᒪᐤ	ᑲ' ᐱᑕΣ	ᐱᒥᒋᑲᒪ
·ᐃΣᔭ·ᒪᑲ·	ᐱᒥᑭᑲᒪᐤ	ᒍᔭ ᒪᑲ	ᐱᒥᑭᑲᒪ
ᑫ·ᒥᒪᑲ·	ᐱᒥᒋᐢᑲᒪᕽ	ᑫᒥᐢ ᑯ·	ᐱᒥᒋᑲᒪᐤ
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'We had no trouble getting the Indians to sign the enclosed pledges. Before I would let them sign I made sure they thoroughly understood the nature of their pledge. One and all were very much pleased with the badges given them. They pinned them in all sorts of places on their clothing, where each one's fancy thought the most conspicuous place. One man would not take his badge until he had first washed himself and changed his shirt, and then the badge was used as a collar button or brooch. Hats and shirts were the favourite spots for adornment but not a few—after carefully polishing them—would fold them in cloth to keep them for some special occasion.

'A great percentage of them feel they are thus, having received the badge from the government, constituted minor chiefs and guardians of the forest.

'Some, not many, refused to sign the pledge and it is these whom we have to watch.

'It is generally expressed around Norway House that this is the first summer for many years that there has been no forest fire visible from here. This may not altogether be due to our presence and work here, but I think in a large measure it is.

'It may not be out of place here to write concerning my trip to Split Lake. This was in the forepart of August. On my way down I travelled for two days with about twenty Cross Lake Indians. These men talked freely of the "Big Fires" in the past, always seeking to impress upon me that *not they,* but some other band, were responsible for these.

'The timber around Pipestone lake is some of the best I have seen in the north here. How far it extends I cannot say. At Sipiwesk lake (by the way, there must be nearly 2,000 islands in the lake) I saw where one of the islands had just been burnt over. Some Nelson House men had camped there the day previous, and although they had undoubtedly drowned the main body of their camp fire (we could still see the wet coals) some fire must have still been allowed to remain in the moss from which the bush fire started.

'On Sunday, August 6th, I camped with about fifty-five Split lake Indians (Indians as a rule do not travel on Sundays). I took the opportunity on this occasion to speak to them with reference to the prevention of forest fires. They all seemed interested and the chief spoke to his men, telling them to heed what I had told them. I had few badges with me on this trip, so did not give any to other than the chief. He seemed to appreciate the honour. I also took photographs of these men pledging themselves by the raising of hands to put out their own camp fires, and one of the chief.

'On our return we met eight York boats taking the last of the summer's freight to outposts.

'At Devil's river on the Nelson we put out what would, in a short time, have been a big fire. Some careless Indians had built a fire inland some distance the previous day, and as it was raining some neglected to put water on it on leaving. It had rained some during the night, but when we arrived there at about 2 p.m. the next day the moss and underbrush were just commencing to blaze up for a hundred yards or so. I took a photo of this as best I could, showing a fine specimen of spruce tree whose roots had been burnt to a depth of eighteen inches.'

Attached hereto is also a report of an exploratory trip made by Mr. Blackford during the winter.

In the Battleford district the chief ranger, Mr. George Douglas, worked out an arrangement with the provincial authorities whereby local rangers were authorized by them to take charge in districts that were not timber districts in order to act as an auxiliary force to the regular rangers. These men were to take charge of the fighting of fires that occurred in their districts, being paid only for the time they were so engaged. This arrangement was of considerable assistance in preventing fires.

In the Edmonton district it was arranged to place a steamer on the Athabaska river to assist in the fire patrol. From Grand Rapids to the mouth of the McLeod river is a stretch of water navigation where the current is so strong as to make navigation by canoe difficult and at times impossible and where the country is accessible only by the river. Strong representations were made to the department that there should be some better method of patrolling this district than that previously followed, and it was decided to place a patrol boat on the river. The boat is 42 feet in length and has a draught of 10 inches. The engines are powerful enough to force the boat upstream against the strongest current and it has been pronounced well equipped for the work required. The boat rendered good service through the season after she was launched.

Another boat was ordered for similar work on the Mackenzie river, but owing to the late date at which the order was given, necessitating late delivery, and the necessity for giving all attention to getting the reindeer shipment down the river. this boat was not forwarded but is available for service in the coming season. Several boats of this kind on the Lesser Slave lake, Peace river and Mackenzie river waters would be of much advantage in fire-fighting in those isolated districts where the rivers are the highways.

In the Coast district of British Columbia the most serious fire which occurred was at Coquitlam lake on land which was being cleared by the Vancouver Power Company. This fire burned for six weeks in spite of the efforts of the fire-rangers, and resulted in damage to fourteen million feet of timber, of which five million feet was a total loss. The patrol would be assisted very much by the erection of huts at points where the rangers should be constantly on the watch and by the opening up of new trails to give quicker access to paths of the patrols which can now be reached only by roundabout routes. As there are water stretches of considerable length in this district the work of the rangers would be greatly assisted by more boats on some of these water routes.

In the mountain districts of British Columbia there were a large number of fires and it is noticeable that in many cases lightning is given as the cause. The loss caused by these fires was 1,555,000 feet of timber. The most serious fire was on the railway line from Revelstoke to Arrowhead. Lumbering has been carried on all along this line and there is a great deal of débris which makes this a specially dangerous district, and there has been trouble with fire there almost every year. As the railway company proposes to adopt oil for fuel in its locomotives on this line during the coming year the danger should be greatly reduced.

PATROLS ALONG RAILWAY LINES.

A patrol of rangers under charge of J. A. Dunn was maintained along the line of the Grand Trunk Pacific Railway west of Edmonton, and on the Canadian Northern Railway after construction to the Yellowhead Pass began. On the Alberta Central Railway and on the Canadian Northern Railway in the railway belt in British Columbia patrols were also maintained. As a result no fires escaped from the right of way and it was cleared of débris in all cases so as to leave little danger of fire.

A number of railways into the northern forest districts are projected. The Hudson Bay Railway will pass for most of its course through a continuous tract of immature forest. Other railways in Saskatchewan and Alberta have been chartered to construct lines into the north country and for some years to come there will be great danger from this source. Arrangements are being made to guard all these lines of construction.

Patrols have been maintained along the railway lines in operation which undoubtedly form a chief point of danger. Several of the worst fires of last season occurred along railway lines and in some cases the railway was probably responsible for the fires starting. The railway companies have shown willingness to co-operate in measures for the prevention of fires and have taken steps to clear their rights of way of inflammable material. The Canadian Pacific Railway has been doing this work through the mountain sections.

This railway is also changing its locomotive fuel through the mountains from coal to oil which will greatly reduce the danger on the steep grades in that section.

As the cost of the first patrol along the lines of railway is a heavy charge on the department, I recommended that the Forest Reserves Act should be amended so as to provide for charging one-half of the cost against the companies. As, however, an amendment to the Railway Act which has since become law had been proposed, by which the railways were to be required to furnish a fire patrol under regulations of the Board of Railway Commissioners, the recommendation was not proceeded with. Since the amendment to the Act has become effective, recommendations have been submitted to the Board of Railway Commissioners as to the patrol which should be required of the railways passing through forests on Dominion Lands.

TIMBER SURVEYS.

The inspection of the timber along the proposed route of the Hudson Bay Railway was continued from Split lake eastward to Hudson Bay along the Nelson river, and the report of Mr. F. W. Beard thereon is appended hereto. No large timber was found on the route except in a few places along the river where small clumps of mature spruce, aggregating only a few square miles, were found. In the remainder of the district traversed the timber is mainly small-sized black spruce, with some tamarack growing in the muskegs. The cold, wet soil of the muskeg makes the growth of the trees very slow, and as one goes towards Hudson Bay, the forest degenerates into an alpine type in which the trees are small and stunted and grow so slowly that the forest cannot be reproduced in one thousand years.

A timber survey under charge of W. J. Vandusen was carried out in the Porcupine Hills district in Manitoba in order to determine what additions, if any, should be made to the Forest Reserve. The district to the south, east and north of the reserve was examined and a large area not now included therein was found to be rough and hilly, with a clay soil mixed with boulders, subsiding as it approaches the Canadian Northern Railway on the east into a fairly level plateau, the soil on which consists mainly of sand with intervening muskegs. The timber is mainly spruce and jackpine, and several large tracts are held under timber license. Being of poor agricultural value a recommendation was made for the inclusion in this reserve of an additional area of 272,640 acres.

Mr. D. R. Cameron made an examination of the timber areas in the vicinity of Lesser Slave lake and the report submitted is being published as a Bulletin, No. 29, of this branch. The Lesser Slave lake district is on the line of travel to the Peace River district, and with the interest which has developed in the opening of that new district will be on the line of travel by river and trail for the increasing numbers that are entering the country. Railway construction will also be begun, and it was, therefore, considered important that an examination should be made of the timber of this district and plans outlined for its protection.

Generally speaking, the rivers were taken as bases for the survey, but in parts of the territory it was found necessary to send out sub-parties across the muskegs, the members 'packing' their supplies on their backs.

From Sawridge (at the east end of Lesser Slave lake) the party worked along the north shore of the lake to The Narrows, then returned to Sawridge and worked along the south shore of the lake in the Swan Hills country. The exploration of this country could not be finished, but will be completed during the coming summer.

Lesser Slave lake is very shallow and the north shore is very stony. It is drained by the Lesser Slave river, which flows through a valley eight to ten miles wide, consisting of flat, burned muskeg country, with interspersed gravel and boulder-clay ridges, and joins the Athabaska river at Mirror Landing.

Northeast of the lake lies a plateau known as Martin Mountain, and to the south is another plateau known as the Swan Hills. West of The Narrows the distance between the lake and the plateau increases and large areas of agricultural land are found.

Generally speaking, the soil of the agricultural areas consists of loam (clay or sandy) underlain by boulder-clay. Agricultural areas are found north of the Athabaska and east of Mirror Landing (about 75 square miles), from Muskeg Creek to Mirror Landing along the Lesser Slave river (about 15 square miles), in township 73, ranges 2 and 3 (25 square miles), adjacent to Sawridge (9 square miles), south of Martin Mountain between Muskeg and Martin creeks (45 square miles), in township 72, range 6 (10 square miles) and along Swan river (25 square miles). West of the Swan river and north of the Swan Hills is a larger area, most of which will be good farming land. There are, perhaps, 360 square miles of this land.

The great areas of non-agricultural land fall into two divisions, viz., (1) undrained, and (2) broken. Areas of the former class consist of muskeg; the latter are included in the broken plateau country.

Of the 6,700 square miles examined, about 2,000 square miles consist of muskeg. On some 923,000 acres aspen poplar predominates, forming eighty per cent of the total stand. The average yield of pulpwood in forest of this description is about twenty cords per acre. This poplar country is capable of being reforested with spruce.

Along the Swan river some cottonwood is also found. There is also a small quantity of birch along the Assineau river. Stands of young jackpine occur on sandy soils, especially along the Athabaska and Lesser Slave rivers.

On the valley slopes of the Swan Hills much lodgepole pine is found. The total area of this type amounts to about 1,900 square miles. On over ninety per cent of this area the present growth has not attained tie size, being useful, however, as a protective covering and for a possible future supply of pulpwood. Some 1,500,000 ties may be obtained from this area. The present yield of pulpwood would be about 5,780,000 cords; this quantity will in all likelihood be doubled if the timber is allowed to grow for twenty years.

In the Martin Mountain district an additional supply of pulpwood (mainly balsam fir) can be obtained.

Of the total area of land examined, fourteen per cent has been burned over within the last twenty-five years. The poplar tracts have not been visited severely, but the muskeg has suffered very much. Within the period specified (that is, the last twenty-five years) over 300 square miles have been burned along the Lesser Slave river, 230 square miles east of Martin Mountain, 90 square miles north of The Narrows, 140 square miles in the Swan Hills, 45 square miles near the head-waters of the Otauwau, besides other smaller fires. The most serious of these is that in the Swan Hills, where probably 350,000,000 (three hundred and fifty millon) feet of timber was destroyed in the two fires that, at an interval of thirteen years, ran over the area—a quantity of timber sufficient to have supplied the needs of a large community for years.

There has been very little reproduction on these areas.

For convenience the country may be divided into ten districts, as below, and the timber summed up as follows:—

District.	Ties.	Pulpwood. Cords.	Timber. Ft. B. M.
Moose Lake	16,000	4,320,000	4,820,000
Lesser Slave River Valley	5,000	....	2,500,000
Martin Mountain	227,000	14,288,000	12,700,000
The Narrows	....	734,000	1,720,000
Otauwau	2,000	108,000	53,000,000
North Slopes	....	2,592,000	207,722,000
Swan Hills	1,500,000	5,780,000	10,000,000
Upper Saulteux	....	4,680,000	56,150,000
Vermilion Creek	....	....	....
Coutts River	2,250,000	522,000	....
Total	4,000,000	33,024,000	348,612,000

Mr. Cameron recommends that the Swan Hills country and the Martin Mountain region be set aside as forest reserves. They are, he points out, unsuitable for farming purposes, and in addition to the providing of a future timber supply the forests must be preserved in order to regulate the water-supply of the rivers and to prevent their eroding their banks. Of late years the continual denudation of the country at the head-waters of the Lesser Slave river tributaries by fire has given rise to alternating conditions of very low and very high water, which have proved very harmful to navigation. Indeed, things have come already to such a pass that every bad storm means a miniature freshet, and a week's rain a swollen torrent, bringing down trees and driftwood of all kinds which are a menace to navigation. Moreover, erosion is rapidly filling with silt the channels of the rivers and forming sand and gravel-bars. In a district whose development depends largely on water communication, the advisability of remedying this state of affairs by the preservation of the forests is obvious.

Much better protection of the forests against fire is essential, and Mr. Cameron has submitted a scheme of patrol districts and lookout stations which should, if carried out, go far to meet this need.

Mr. E. G. McDougall had charge of the inspection of the Porcupine Hills in the province of Alberta. This range of hills, of an elevation 4,000 feet to 5,800 feet above sea-level, lies in proximity to the Rocky mountains and is surrounded by a well developed agricultural and grazing country. The hillsides are partly timbered with a scattering growth of Douglas fir, spruce and pine, which occasionally forms merchantable stands. The timbered area has been much reduced in recent years by logging operations and fires, but these hills have long been the chief source of timber supply to the adjacent country and small towns. A number of important streams already much used for irrigation have their sources in these hills. For these reasons it was considered advisable to recommend the reservation for forest purposes of an area of 194 square miles.

Later in the season Mr. McDougall made an examination of the sandy tract of land on the north side of the North Saskatchewan river opposite to Prince Albert in the vicinity of the Pines and Nisbet Forest Reserves. The land examined consists of sand-hills and muskegs and is not suitable for agriculture. The trees, while not of large dimension, are of quick growth and provide valuable material for fuel, fencing and ties. One hundred and thirty-six square miles north of the river were recommended as an addition to the Nisbet Forest Reserve, and thirteen square miles south of the river were recommended to be added to the Pine Forest Reserve. An inspection was also made of a tract in the vicinity of Fort à la Corne, east of Prince Albert on the Saskatchewan river, which was reported to be non-agricultural. This district differed from that in the vicinity of Prince Albert, chiefly in the larger proportion of muskeg. As the season was late and there was considerable snow on the ground, a thorough examination could not be made and the district will have to be further inspected. The non-agricultural area will, however, include some 512 square miles.

Mr. G. H. Edgecombe had charge of two parties which continued the examination of the boundary of the Rocky Mountain Forest Reserve northward from the North Saskatchewan river, that being the point to which the survey of the boundary was carried in the previous year. The mountain range broadens and the foothills extend farther out into the prairie as they go northward and there is a broad expanse of muskeg and broken country that makes the eastern boundary of the reserve difficult to determine. It was found that, to include the absolute forest land, it would be necessary to fix the boundary along a considerable part of its course to the east of the line previously determined on and this will involve an addition of 2,483 square miles to the reserve.

The timber here, as elsewhere, has suffered seriously from fire, and the windfalls and muskeg make the work of exploration difficult and arduous. Mature timber occurs only in small areas and consists of spruce, lodgepole pine and a few patches of Douglas fir. The rivers are large and important tributaries of the Saskatchewan and Athabaska rivers and the watershed is a not less important one than that in the southern part of the reserve. Coal seams of great value occur in this part of the reserve and mines are now being rapidly developed. The demand for timber for the operation of the mines will be so large that it is doubtful if, in their present depleted condition, the forests can supply what will be required.

In the Coast district of British Columbia, Mr. H. Claughton-Wallin made a special examination of the Anderson river district in addition to smaller inspections. The stand of timber on this river was rather a disappointment, as it was found to have been largely damaged by fire; so that, with the expensive construction that would be necessary to take the timber out by railway,—the only possible means,—the cost would make present operations unprofitable.

Under Mr. J. W. Curry an examination of the timber on the English river was made and his report is attached hereto. The stand was found to be disappointing. This territory will hereafter be included in the province of Ontario.

FOREST RESERVES.

The Dominion Forest Reserves and Parks Act, assented to on May 19, 1911, besides making some changes in the wording of the Act, made an addition to the forest reserve area of 13,403,600 acres, the principal part of which is the Rocky Mountain Forest Reserve. The total area included in the reserves is now 16,128,920 acres and the list of reserves is as follows:—

British Columbia:—

	Area.	
Long Lake..	121,600	acres.
Monte Hills..	67,840	"
Martin Mountain..	11,360	"
Niskonlith..	80,000	"
Tranquille..	95,360	"
Hat Creek..	131,200	"
Larch Hills..	16,000	"
Yoho Park..	463,040	"
Glacier Park..	367,360	"

Manitoba:—

	Area.	
Riding Mountain	982,400	acres.
Turtle Mountain	69,920	"
Spruce Woods	143,680	"
Duck Mountain No. 1	898,560	"
Porcupine No. 1	199,680	"

Saskatchewan:—

Beaver Hills	63,360	"
Pines	98,560	"
Moose Mountain	99,840	"
Porcupine No. 2	230,400	"
Duck Mountain No. 2	51,840	"
Cypress Hills No. 2	46,080	"
Nisbet	9,560	"

Alberta:—

Cooking Lake	71,360	"
Cypress Hills No. 1	51,840	"
Rocky Mountains	11,656,320	"
Buffalo Park	101,760	"

The organization of the reserves has not been altogether satisfactory, partly due to the fact that the appropriations available were not sufficient to provide a proper organization or the facilities necessary to have the rangers live in their districts in the reserves or to provide for quick communications, and partly on account of the failure of some of the rangers to properly administer their districts. A more adequate appropriation has been provided for the coming year and with some reorganization which has already been partially carried into effect it is expected that during the coming year considerable progress will be made in overcoming these defects.

The form of organization adopted is to have each reserve divided into permanent ranger-districts with a permanent ranger in charge who will be required to live in his district in a house to be provided by the department. He will be required to patrol his district, to protect it from fire and trespass, to open up trails and roads through it, and to keep in order any telephone lines that may connect his district with others. He will also look after any lumbering operations carried on in his district so as to see that the regulations of the reserves are being properly observed and to check up the cut. He will report to and receive instructions from the supervisor, who will be in charge of the whole reserve.

The supervisor will be responsible for the laying out of the work on the reserve, for the work of the forest rangers, for payment for work done, and in most matters will report directly to the head office at Ottawa and receive instructions therefrom. While the supervisor is the better for technical training it is not absolutely required, if he has good executive ability. On the larger reserves there is also a forest assistant, who is a technically trained man, a graduate of a forest school, and who acts as technical adviser to the supervisor and under his instructions.

A system of inspection of the forest reserves is provided. The inspector must be a technically trained man with executive ability and experience. His work is to advise with the supervisors and rangers as to the best methods of handling their work and as to new work to be undertaken, to see that the regulations are being observed by these officers and to check their work and expenditures generally. While the organization is in process of development the work of inspection is of special necessity, and heretofore the provision for it has not been adequate.

The staff on the reserves is as follows:—Supervisors, 5; permanent rangers, 35; temporary rangers, 11.

In order to carry out the work of the reserves effectively it will be necessary to make better provision for handling the office end of the work. Records of correspondence, instructions, expenditures and revenues should be in much better order, and for this purpose office accommodation and equipment are required.

The only fire causing serious loss was one on the south side of the Riding Mountain Forest Reserve which came in from settlement in the vicinity. This fire killed a quantity of spruce, estimated at 1,870,000 feet board measure. In consequence of this fire it was necessary to dispose of the timber immediately to prevent its becoming a total loss. The tract was divided up into ten berths and put up for sale by competition and prices of $2 to $2.10 per thousand on the stump were received. The timber was sold on the condition that no green trees should be cut except those that were marked by a forester for removal, that stumps should be cut not higher than eighteen inches, and that the débris of operations should be piled or otherwise disposed of under the instructions of the forest officers.

It was also considered desirable to permit a few mills to locate in the Riding Mountain Forest Reserve as the timber near the boundaries of the reserve was largely cut out and it would convenience the settlers to be able to have their logs sawn in the bush so that they would need to haul out only the lumber. The right to locate three mills in the reserve was put up to competition on the 23rd day of December on the basis of the rate to be charged for logging and sawing for the settlers. The tenders received were from $9 to $10 per thousand feet. Although the season was then late for commencing operations the millmen took hold of the work and on the whole have carried out the regulations well.

The trees were utilized fully and the bush piled on the operations of the millmen, both in the dead timber and the green, and the work of the past season was a distinct advance on that of the previous year. The millmen begin to understand better what is wanted and to see the purpose of the methods followed. Similar operations were conducted on the Rocky Mountain Reserve.

The settlers cutting their own logs under permit were also required to utilize the trees more fully and dispose of the brush, but their operations, being individual and scattered, were more difficult to watch. There was a distinct advance here also in the improvement of methods.

Some criticism was heard from both the settlers and the small millmen that these regulations were not enforced on license berths within the reserves. The provisions of the licenses provide fully for such regulations being enforced, but a question has been raised as to the jurisdiction of this Branch in the matter which has prevented consideration of the action that should be taken.

On the Turtle Mountain Forest Reserve in Southern Manitoba a portion of the reserve was fenced, as it was thought that, if it were grazed over, the keeping down of the grass would assist in preventing fires. Regulations were adopted for handling such grazing, the provisions being as follows:—

Grazing Permits in Turtle Mountain Forest Reserve.

1. Permits for the grazing of cattle or horses within such portions of township 1, range 21, and township 1, range 22, west of the principal meridian, as lie within the boundaries of the Turtle Mountain Forest Reserve may be granted subject to the regulations hereinafter provided.

2. The number of stock which may be grazed upon the said tract and the period during which grazing will be permitted shall be determined for each year by the Director of Forestry.

3. Subject to the approval of the Director of Forestry, the forest ranger or other officer in charge of the reserve shall fix a date before which all applications for grazing permits shall be submitted, and any applications received after the date fixed shall be entitled to consideration only after the applications received prior to such date have been satisfied or disposed of. Due notice of the date fixed shall be given at least thirty days before such date of advertisement in a newspaper circulating in the district.

4. Applications for grazing permits must be made on the form prescribed for that purpose and must give a sufficient description for identification of the stock, including the marks and brands, when there are such.

5. Bona fide residents in the vicinity of the reserve will be given preference in the granting of permits.

6. The dues for a grazing permit shall be twenty-five cents per head of stock per month, or one dollar per head of stock for the season, payable in advance. Only stock six months old, or over, will be counted in the determination of the dues for a permit.

7. Permits will be granted only for the exclusive use and benefit of the owners of stock, and will be forfeited if sold or transferred in any manner or for any consideration.

8. When a permittee is ready to drive stock into the grazing tract on the reserve, he must notify the forest ranger or other officer in charge of the reserve, by mail or otherwise, stating the number of stock to be driven in. Similar notice must also be given when the stock are to be removed. Any stock removed before the expiration of the permit may be replaced by other stock, to an equal number, which are owned by the permittee.

9. At the expiration of the permit, the permittee shall remove his stock from the reserve, and if this is not done within seven days after the expiration of the permit the officer in charge of the reserve may have the stock removed and the department will assume no responsibility for the loss of the stock or for damage occasioned by them.

10. Whenever the forest reserve officer requires it, all stock grazed under permit must be salted regularly at such places and in such manner as he may designate.

11. The carcases of any animals which die within the reserve must be removed by the owner immediately and buried or burned.

12. All permittees are required to aid in extinguishing fires in the tract within which permits are granted.

13. The department will not be responsible for damage which may be caused by stock escaping from the enclosure.

14. If upon examination it is evident that grazing is damaging the forest and interfering with the production of wood, the Minister of the Interior may order that grazing shall cease.

The experience of the past year is not sufficient to give information as to the success of the experiment.

Heretofore the regulations for forest reserves have provided only for the granting of permits for timber for the use of settlers, the settler being a person living on a farm. It would seem, however, that, as the reserves are the property of the public, persons living in towns and villages (many of whom are less able to obtain timber otherwise than are the farmers) are as much entitled to consideration as the latter, and there does not seem to be sufficient reason why this restriction on the use of the reserve should be continued. Timber permits might also be allowed for schools, churches and municipal works.

The reserves might also furnish the supply for small manufacturing establishments. In the vicinity of each of the reserves there might very well be, in the future, many industries carried on which would assist local trade and furnish a considerable source of wealth.

There are tracts within the reserves which have a good growth of grass and upon which grazing could be carried on without damage to the forest. This is particularly true of the Rocky Mountain Forest Reserve. Regulations similar to those established for the Turtle Mountain Forest Reserve would enable the handling of this question on a satisfactory basis.

LICENSED TIMBER BERTHS.

In order to protect the rights granted to licensees of timber berths granted under the Dominion Lands Act prior to enacting of the Forest Reserves Act and the setting apart of the reserves, Section 11 of the Forest Reserves Act enacts that 'nothing in this Act shall affect or prejudice any right or interest which has heretofore been acquired, under any lease or license, for cutting timber or for any other purpose in respect of any lands within a reserve.'

This saving clause has now been legally interpreted to have the effect of withholding from the forest reserve and the operations of the Forest Reserves Act the timber covered by license with the result that this timber which forms the main body of mature timber in the forest reserves and which should be operated with a view to conserving a future supply will be out of the control of the forest reserve administration, and only the bare and unproductive portions are to be administered for the purposes for which the reserves were set apart, and only the settlers and small operators will be subject to proper regulation and protection. The Act could easily be amended to remove such an anomaly without affecting injuriously the rights of the licensees, and unless it is removed the purposes for which the forest reserves have been set apart will be largely nullified.

SPECIAL INVESTIGATIONS.

As, in providing for the reproduction of the forests, natural processes will have to be the great dependence, it was considered necessary that a special investigation should be begun of the reproduction following fires and cutting so that the methods to be adopted in regulating cutting might be carried out on lines which would give the desired results. The importance of this investigation may be illustrated by pointing out that in the Rocky Mountains a difference in seed-trees left, or in the condition of the seed-bed, may mean the difference between a reproduction of spruce or of balsam fir, and under almost all conditions spruce is the more valuable species.

Mr. T. W. Dwight, a graduate of the Forest School of the University of Toronto, was given charge of this investigation, and the report thereon is published as a bulletin (No. 31 of this Branch).

Mr. H. Claughton-Wallin also made a special investigation of the rate of growth of Douglas fir in the coast district. It was found that at the age of fifty years the average diameter at breast-height (4½ ft. from the ground) was 18·9 inches and the average height 101 feet: at one hundred years the diameter at breast height was 32·4 inches and the height 166 feet. Yield tables have been compiled from these measurements, and are found to agree substantially with those compiled by the United States Forest Service for Douglas fir in the United States.

WATER ADMINISTRATION.

The administration of the water-supply of the country is closely associated with that of the forest. The forest reserves are the source of the rivers and streams, and in them are located great natural reservoirs and sites for artificial ones which may regulate and control the flow of the streams. The forests and the water-supply have, therefore, a close connection and are very suitably administered as one system.

The waters in the provinces of Alberta and Saskatchewan are administered by the federal government under the Irrigation Act. It may be pointed out that although the Act is designated the Irrigation Act, it covers all uses of water and might be designated, as the similar Act is in British Columbia, the 'Water-Users' Act.' The stream measurements, surveys of storage reservoirs, and matters that affect the control of water supply generally, as well as the inspection of works for the use of water for domestic, municipal, industrial and engineering purposes, the construction of drainage works and the granting of licenses for such purposes are dealt with thereunder. The only matter of water-supply not now finally dealt with by the office of the Commissioner of Irrigation is water-power, which has only recently been withdrawn from the operations of the Irrigation Act, and it is somewhat difficult to understand how such withdrawal has made for efficiency in administration. The work of the office of the Commissioner of Irrigation at Calgary is, therefore, the basis for all administration of the uses of water within the territory where the Act has scope. To keep up with the development of the West and the inspection of the increasing number of water applications requires an addition both to the inside and outside staff of the office of the Commissioner of Irrigation if the whole of the work is to be kept up with efficiency.

INSPECTION OF THE CANADIAN PACIFIC RAILWAY COMPANY'S IRRIGATION PROJECT.

Authority was given to the Canadian Pacific Railway Company, in 1904, to construct a system of canals, &c., for the irrigation of a tract of some 3,000,000 acres of land lying along the main line of the company's railway east of Calgary, Alberta. A period of fifteen years was allowed for the completion of the system of works.

The water for this project is taken from Bow river at two points, viz.: on section 13, township 24, range 1, west of the 5th meridian, near the city of Calgary, and at Horseshoe Bend, in township 21, range 18, west of the 4th meridian. For convenience of operation the company has divided its irrigation block by north and south lines into three nearly equal portions. The western section and the small proportion of the central section which is to be irrigated are supplied with water from the canal system tapping the river near Calgary, while the eastern section will be supplied from Horseshoe Bend.

The western section, lying nearest to Calgary, was the first to be constructed and the partially completed works have been used to some extent for two or three years. The company applied in August, 1911, for an inspection of the works constructed in the western section and for the issue of a license authorizing the diversion and use of sufficient water for the irrigable land in this section, estimated at about 370,000 acres. The season was too far advanced to permit of the necessary inspection being made last season, but arrangements have been made to have a thorough inspection made during the season of 1912.

The work of inspection will probably occupy the entire season, as there are about 17 miles of main canal, 254 miles of secondary canals and some 1,300, or more, miles of distributing ditches, all of which will have to be carefully examined so as to determine whether the system is capable of supplying water to all of the irrigable land, and in sufficient volume to permit of beneficial use being made of the water during the limited period when required. Upon the completion of the inspection, if the works have been found to be in satisfactory condition, a license will be issued to the company authorizing it to divert and use, or lease to others, a quantity of water sufficient to irrigate the irrigable land in this section, or as much of it as the works are capable of irrigating. On the other hand, if the inspection shows that the works are not adequate for the purpose intended, the company will be required to make such changes as may be found necessary and the issue of the water license will be withheld until such changes have been made.

ST. MARY AND MILK RIVERS.

Under the provisions of the International Waterways Treaty the waters of the St. Mary and Milk rivers, and all their tributaries in Canada and in the United States, are to be treated as one stream system and the waters are to be divided equally between the two countries, under the supervision of an International Joint Commission.

Hydrogaphic surveys, or stream measurements, have been carried on systematically by this department for several years and especial attention has been given to obtaining records of the flow of the streams affected by this treaty, but these measurements must be continued for several more years before any reasonably accurate estimate can be made of the volume of water carried by the several streams throughout the year, or at any particular period. Steps are now being taken to secure the co-operation of the United States Geological Survey, or the Reclamation Service, in the establishment of gauging stations on the St. Mary and Milk rivers at, or near, the international boundary. It is proposed that automatic gauges shall be established on both streams and that observations shall be taken by the officers of both countries, so that the records so obtained shall not only be as accurate as possible but that they shall be accepted as such by both countries. Under present conditions separate gauging stations are maintained by each country and conditions may arise where the accuracy of the records may be challenged.

There has been a considerable development of irrigated farming, particularly the growing of hay, in the valleys of some of the tributaries of the Milk river in Alberta and Saskatchewan and this development would undoubtedly continue were it not for uncertainty as to the quantity of water which Canada is entitled to divert from these streams under the provisions of the treaty. This question has also been referred to the International Joint Commission for adjustment.

THE SOUTHERN ALBERTA LAND COMPANY.

This company has been authorized to construct a system of works for the diversion of water from Bow river at a point on section 31, township 21, range 25, west of the 4th meridian, for the irrigation of a tract of some 380,000 acres of land between the Bow and Belly rivers, near their confluence, and eastward from that point towards Medicine Hat, Alberta. This land was sold to the company upon the condition that it should irrigate at least twenty-five per cent of the tract, and the company has also purchased a considerable additional area from other sources, so that it now owns over 400,000 acres, nearly half of which can be irrigated from the works now planned or under construction.

The works have previously been described and it may suffice to say that they consist of a very large diversion canal by means of which water is taken from the Bow river, during high and flood stages of the stream, and carried to a reservoir known as Lake McGregor. This reservoir has a capacity of some 360,000 acre-feet, or sufficient to provide for the irrigation of about 180,000 acres. From this reservoir the water is carried eastward by one large canal for a distance of some forty miles to the westerly boundary of the tract to be irrigated and from this point onward the main canal is tapped at several points by subsidiary canals. The main canal continues in an easterly direction to the Bow river, which is crossed by means of a siphon. An additional reservoir has been located some fifteen miles east of the river crossing and provision has been made, by a system of subsidiary canals, for the irrigation of land which the company owns in the vicinity of Suffield.

The company's dam across the Bow river at the point of diversion has been completed and the canal from this point to the main reservoir is now approaching completion. The huge earthen dams at either end of the reservoir and the outlet gates at the lower end are ready for use, but considerable work remains to be done on the canal system east of the reservoir. The siphon across Bow river has not yet been built. The company expects to have the system in partial operation within a year from this date, although its contract with the government does not call for the completion of the works until March, 1919.

THE ALBERTA LAND COMPANY.

The Alberta Land Company has purchased from the government a tract of some 67,000 acres lying northeast of the tract of the Southern Alberta Land Company and has been authorized to construct works taking water from Bow river, through the works of the latter company, for its irrigation. It is required to irrigate at least twenty-five per cent of the tract sold, but can, and probably will, irrigate fifty per cent. Its canal system has all been located and it is expected that a considerable proportion of the work will be completed during the present year. Authorization for the construction of the works was granted on February 29, 1912, and a period of three years was allowed for their completion. It will probably be necessary to somewhat extend the time allowed for the construction of these works, and, according to the provisions of the agreement for the sale of the land, the company has until February, 1919, to complete its works and have them in operation.

HYDROGRAPHIC SURVEYS.

Hydrographic survey work, or stream measurement and reservoir surveys have been carried on by the Irrigation Branch of the department since 1894. For a few years considerable attention was given to this work and much valuable information was collected, notably that which demonstrated the feasibility of irrigating the district between Lethbridge and Cardston, which is now served from the canal system of the Alberta Railway and Irrigation Company, and the larger tract near Calgary now being irrigated from works constructed by the Canadian Pacific Railway Company. After a few years the limited appropriation and the increasing work of inspection in connection with irrigation projects brought about a partial abandonment of hydrographic work and for several years no systematic measurement of stream flow was attempted and reservoir survey work was entirely discontinued.

The increasing demands for water for irrigation, industrial and domestic purposes, due to the rapid settlement of the West, finally made it imperative that more accurate information should be obtained of the water available for such uses, and, in 1908, a small appropriation was made for the purpose of taking up the work of stream measurement in a systematic manner. Little actual field-work was done in that year, but the necessary instruments and equipment were purchased and in 1909 several parties were sent out for the purpose of installing gauging stations at suitable points on the principal streams in the irrigation district. This work has been systematically continued since 1909 and has gradually been extended as far as funds permitted until we now have a fairly accurate knowledge of the flow of these streams. It will be necessary, however, to continue these observations for several years more before the records can be considered reliable.

The increasing demand for water for domestic uses in the rapidly growing towns in the provinces of Alberta and Saskatchewan has very forcibly demonstrated the necessity of extending the work of stream measurements beyond the limits of the irrigation district, but it has not been found possible to very materially extend the scope of the work within the limits of the present appropriation. The appropriation for hydrographic work, including the special work on St. Mary and Milk rivers in connection with the International Waterways Treaty, has been as follows:—

1908-9	$10,000
1909-10	20,000
1910-11	25,000
1911-12	51,500

For the year 1912-13 the hydrographic work has been placed under the supervision of the Commissioner of Irrigation, instead of being conducted as a separate organization as was formerly the case, and an appropriation of $100,000 has been voted for carrying on the whole work. While this is in excess of the total appropriation for both services in the past year, it is not sufficient to permit of all the really important work being taken up, and little, if any, new work can be undertaken. The limited appropriation will only permit of continuing the work of irrigation inspections and observations of stream flow at stations already established.

CONTOUR SURVEYS.

The importance of this work cannot be over-estimated, but it has been impossible to carry on the work in an adequate manner with the limited appropriation available for irrigation administration. The importance of this branch of the work seems to have been clearly realized in the years immediately following the enactment of the first Irrigation Act and much valuable work was done. The inception of the three great irrigation projects—the Alberta Railway and Irrigation Company, the Canadian Pacific Railway Irrigation Company and the Southern Alberta Land Company—was due, primarily, to the pioneer work done by this branch in developing contour surveys. The importance of the work is no less pressing to-day, and it is greatly to be regretted that funds are not available for carrying it on systematically.

At present there are no available data regarding elevations, except the old irrigation survey bench marks and the railroad elevations and these are meagre. It is absolutely impossible to intelligently study any general or large question of water-supply, or water conservation, unless a good general idea of the topography of the country has first been gained; that is, the relative elevations of the various streams and the interlying country must be determined. Two instances may be cited to illustrate this:

The government of the province of Saskatchewan has applied, under the provisions of the Irrigation Act, for permission to divert a very large volume of water from the South Saskatchewan river to supply the domestic requirements of the cities of Moosejaw and Regina and a considerable tract in that vicinity. These cities, along with other towns and villages in the same neighbourhood, are confronted with a serious water problem and the only adequate and permanent source from which they can be supplied seems to be the South Saskatchewan river. The project will involve the expenditure of millions of dollars and it is not safe to decide upon any definite line of work in connection with it until the topography and critical elevations of an enormous tract of country have been developed. Had the work of contour surveys been thoroughly developed in this section it would be possible to make an office study of the more important features and to select the most feasible general location for the necessary works. Field development work could then be confined to a comparatively small area. As the matter stands to-day a large amount of money must be spent on surveys to determine whether or not the project is economically feasible.

Under the provisions of the International Waterways Treaty this government will probably not be in a position to deliver to the Alberta Railway and Irrigation Company the full quantity of water which it is entitled to divert from St. Mary and Milk rivers. The deficiency should be supplied from some other source and a reservation has been made against the flow of Belly river. Owing to lack of knowledge of the topography of the interlying country it is impossible to say at present whether or not it is feasible to divert the required quantity of water from Belly river to the land to be irrigated within reasonable cost limits.

There are large tracts of land in Southern Alberta and Saskatchewan, the value of which can be enormously increased by irrigation, but the cost of the necessary works is entirely beyond the reach of individual land-owners and it is doubtful whether it would be good public policy to permit companies to acquire these lands and to construct the works necessary for their fullest development. Water must be conveyed long distances and drawn from streams whose normal flow has, in most cases, been already fully appropriated. Resort must be had to reservoiring on the head-waters of these streams, and, as this will affect many other interests, such as water-power, the domestic supply of cities and other irrigation projects, the privilege of constructing such reservoirs should be sparingly granted. A better plan would be for the government to construct and operate such reservoirs in the general interest of all the district that may be served by them.

DUTY OF WATER.

One of the most important questions to be settled in connection with irrigation administration is the 'duty of water;' that is, the area of land which can be sufficiently irrigated by one cubic foot of water per second flowing constantly throughout the irrigation season, or the equivalent of such flow applied to the land during a shorter period of time.

The duty of water as defined in the Irrigation Act was never intended to be the final word on the subject, in fact it was to some extent an experiment, and the time has now arrived when experimental work should be undertaken to determine with some degree of exactness the quantity of water required for the production of the various crops grown within the irrigation district, under the varying conditions of soil and climate.

The question of fixing, or readjusting, the 'duty' has often been discussed and at the last convention of the 'Western Canada Irrigation Association,' held at Calgary in August, 1911, the following resolution was adopted:

> 'Whereas a knowledge of the practical duty of water for various crops has a most important bearing on irrigation development; and whereas information upon this important question available in any of the provinces of Alberta, Saskatchewan and British Columbia is vague and incomplete;
>
> 'Therefore, be it resolved that the attention of the governments interested should be directed to this important matter, and that they should be urged to carry out a thorough system of investigation to determine the duty of water in the different provinces and for the different crops, so that such duty may then be determined with approximate exactness.'

DRAINAGE.

A great many applications have been received for permission to drain lakes, sloughs or other bodies of water controlled by this department under the provisions of the Irrigation Act, and to acquire, by purchase or otherwise, the lands to be so reclaimed. These applications fall naturally into three general classes:—

1. The drainage of large tracts of marshy land, or areas of combined land and water. Some of these applications cover hundreds of thousands of acres.
2. The drainage of small lakes or sloughs.
3. The reclamation of fractional quarter-sections of land abutting upon a lake or slough.

With respect to the first class the applicants have not, as a rule, furnished sufficiently precise information as to the feasibility of the proposed undertakings to warrant the sale to them of the large tracts affected. Before the department would be justified in disposing of such considerable bodies of land it should be shown clearly that the land in its present condition is not fit for cultivation; that its reclamation is feasible within reasonable limits of cost; that the character of the soil is such as to make it suitable for cultivation when drained and that the draining away of the bodies of water will not injuriously affect any other interests—in other words, that the absence of the water is of more benefit than its presence.

An additional difficulty in dealing with such applications is the fact that full control of the drainage of land is by law vested in the provincial governments, while the water and the land are controlled by the Dominion. The proper method of procedure would appear to be for applicants for drainage rights to first secure the approval of the provincial government and a formal authorization for the construction of the proposed works under the provincial drainage laws and then to apply to this department for permission to drain away the bodies of water affected and to purchase the land to be reclaimed. In the event of failure to secure authority from the province for the construction of the works application might be made direct to this department and it would then become necessary to ascertain to what extent the Dominion government has the right to reclaim, or improve, its own lands in order to promote the settlement and development of the country.

In connection with the drainage of small lakes, or sloughs, sufficient information is usually given by the applicants to permit of determining the feasibility of the project from an engineering point of view. The chief difficulties in dealing with these applications are: (1) Uncertainty as to whether the works are to be constructed under provincial legislation respecting drainage; (2) similar uncertainty respecting the attitude of the provincial governments towards the projects, and (3) objections raised by owners of adjacent lands. In cases where the projects are opposed by other land-owners in the vicinity, and where authorization has not been granted by the province for the construction of the required works, this department would appear to be stopped from granting approval for the draining away of the bodies of water affected, and, consequently, from disposing of the land subject to any conditions as to its drainage.

The drainage of fractional quarter-sections and the disposal of the land so reclaimed present few difficulties from an administrative point of view. The provincial governments do not, as a rule, require that such works be constructed in accordance with their laws, and, except where objections are raised by neighbours, this department usually approves of the plans and authorizes the draining away of the water. If the remainder of the quarter-section has been patented to the applicant as a homestead or pre-emption, supplementary patent is usually issued without cost for the reclaimed area, but where the land is not so held the area reclaimed is sold at a fair valuation.

WOOD BUFFALO.

In the vicinity of the Great Slave river is a herd of wood buffalo which has been variously estimated at from one hundred to three hundred head. It was decided last year that this Department should take some steps directly to protect this herd in addition to the work of the Mounted Police. Two men were therefore appointed for the purpose of trying to locate and number the buffalo herd, to determine what were the causes of destruction of these animals and to destroy the wolves that might be found preying upon the herd. An experienced trapper, Mr. Peter McCallum, and Mr. G. A. Mulloy were appointed, Mr. Mulloy being a young man of education who would be able to report on the work done. Attached are copies of reports received from Mr. Mulloy. Up to the last reports it had not been possible to get any estimate of the herd. As they range over a large territory which is largely wooded it will be extremely difficult to get an accurate enumeration. Little sign of wolves was seen and none were captured.

A proposal is made by Mr. A. J. Bell, the Government Agent in that district, that the buffalo should be confined by a fence in the peninsula between the Peace and Great Slave rivers where they could be better protected. Some such plan may be the best final solution of the question. For a fence of sufficient strength to confine the buffalo the cost would be large. The cost of the fence around the Buffalo Park in Saskatchewan was on the average $828.50 per mile, and such a fence could hardly be erected more cheaply, and at this price the fence required, estimated by Mr. Bell at 125 miles, would cost $103,562.50.

REINDEER HERD.

At the suggestion of His Excellency Earl Grey, the Governor General, the then Minister of the Interior took up with Dr. W. T. Grenfell a proposal for sending to the Mackenzie river a shipment of reindeer from the herd in Newfoundland under charge of Dr. Grenfell. It was considered that the deer would prove much more valuable than dogs for transportation purposes, and, as they could feed themselves on the moss which grows in the northern districts and would themselves be of value for food, they would become not only a most useful adjunct to travel in such districts but also a source of wealth. In Lapland, the home of the domesticated reindeer, a man's wealth is reckoned by the number of deer he owns, and a similar state of affairs is developing in Alaska where reindeer were introduced by the government of the United States. Alaska is now exporting reindeer meat to the markets of the United States, a shipment of two thousand carcasses having been received recently in Chicago.

Under instructions I discussed the matter with Dr. Grenfell, and on the 9th June, 1911, he submitted a written statement of the terms on which he would supply fifty deer from his herd to the Department. The terms were $51.30 per head, young and strong breeding does and stags to be supplied. Three herders were also to be supplied and three herd dogs. This offer was submitted and authority given for its acceptance. The purchase was, therefore, made and the shipment carried out under charge of Mr. E. F. Drake, whose report attached hereto gives full particulars in regard thereto.

The loss of deer on the route was nineteen. While this was a heavy loss, part of which might have been avoided, it may be pointed out that the shipment had to be made in a rush and that it will have to be done in the same way in any future shipment. The deer cannot be taken across Canadian summer weather, as they will not stand the heat. They cannot be taken across in winter unless provision is made for a supply of reindeer moss near Edmonton, as the rivers are frozen and they cannot be transported beyond that point. They cannot be moved in the spring, as that is the fawning season. There is, therefore, only the short season left between the close of summer and the 'freeze-up' of the northern rivers.

At last accounts in March the herd were doing well and the prospects are that the experiment will be fully successful. As the herd is a small one and in order to develop a herd large enough for stocking the northern districts in a reasonable time, a considerably larger herd should be started, it would seem advisable that an addition to the herd should be made in 1913, as the success of the experimental shipment would then be fully determined, and that the shipment should be large enough to furnish the stock necessary for future development. The Government of the United States imported twelve hundred and eighty reindeer to Alaska to start the industry there, and the herd introduced into Newfoundland by Dr. Grenfell numbered three hundred.

CORRESPONDENCE.

Statement of letters, etc., received and sent out by the Forestry Branch during the fiscal year beginning April 1st, 1911, and ending March 31st, 1912:—

Number of letters received		17,815
Mail sent out:—		
Letters, circulars, etc.	68,615	
Bulletins and reports	143,926	
Parcels	3,781	
Total		216,322

Respectfully submitted,

R. H. CAMPBELL,
Director of Forestry.

No. 2.

REPORT OF H. R. MacMILLAN.

Department of the Interior,
Forestry Branch,
Ottawa, June 20, 1912.

R. H. Campbell, Esq.,
Director of Forestry,
Ottawa.

Sir,—In submitting herewith my report on the work with which I have been connected during the past year, I wish to draw attention particularly to the fact that the greatest difficulty which now faces the Forestry Branch is the difficulty of getting a class of men to take charge of the executive work in the field who are capable of doing the work required by the Forestry Branch, and who are willing to exert themselves to get it done.

The area of the forest reserves at present actually administered by the Forestry Branch is about 14,948,000 acres, or slightly greater than the combined areas of the two provinces of Nova Scotia and Prince Edward Island.

The Forest Reserves and Parks Act places upon the Forestry Branch the responsibility of protecting this area from fire, and provides that no use shall be made of any of this area except upon terms which require the personal attention of a forest officer.

Not only is the forest reserve area as large as a principality, but it is widely scattered and consists of the most inaccessible and impenetrable brulé, muskeg, mountain and forest land in the west. The great distances to be covered and the impassable nature of a large proportion of the country at different seasons of the year render it impossible for any inspecting officer to personally initiate, execute or supervise the work on the whole area.

During the past year the Dominion Forest Reserves were divided into three inspection districts, as follows: Manitoba, including all the forest reserves in Manitoba and the Beaver Hills and Moose Mountain in Saskatchewan, a total area of 2,739,000 acres; Alberta, including all the forest reserves in Alberta and the Cypress Hills and Pines in Saskatchewan, a total area of 11,816,000 acres; and British Columbia, including all the forest reserves in the railway belt, a total area of 392,000 acres. Each inspection district is in charge of an inspector who spends his whole time in the district, and who is responsible to the head office for the planning, supervision and inspection of the work in his district.

Within each inspection district the actual administrative units are the forest reserve. Large reserved areas, such as the eastern slope of the Rocky Mountains, are divided into administrative units of from 1,000,000 to 4,000,000 acres each. Thus the original Rocky Mountain Forest Reserve has been subdivided into the Crowsnest, Bow River, Clearwater, Brazeau and Athabaska Forest Reserves.

The executive head of each forest reserve is the forest supervisor. The forest supervisor is held responsible to the District Inspector and to the head office for the planning and execution of all the work which must be done in order to make the reserve accessible and safe from fire ; for the training of a staff of forest rangers, and the personal direction of the examination and survey of surface rights applied for, timber to be sold, and the handling of grazing business. When it is understood that the Forestry Branch at present, in the work of making the reserves accessible and in improving fire protection, requires supervisors to locate and build wagon roads, pack-trails, and telephone lines through swampy and mountainous country, to build ranger stations, to transact a large volume of public business, and to keep accurate records, it will be understood that the position of forest supervisor cannot be satisfactorily filled except by a man who has had a thorough training in handling men or in some executive position of a similar nature, and who possesses energy, initiative and high ideals of public service.

The forest reserves are together larger than Nova Scotia. In one inspection district alone, that in Alberta, the inspector could not cover his whole district once a year in detail if he travelled the whole time. Therefore, inspection alone cannot be relied upon to prevent a loss or misdirection of time and money in the work on the reserves. The forest supervisor, who is on the forest reserve all the time, is the one man whom the Forestry Branch can depend upon to see that every measure is being taken to prevent forest fires, that trespass is being prevented, and that the resources of the forest reserve are being administered in accordance with the terms of the Forest Reserves Act. If the loss of money and the loss of timber are to be prevented, if the whole forest reserve policy is not to be rendered farcical, the forest supervisor must be a man who will be led to do his best because of his interest in his work and not because of any fear of inspection. In case he is not such a man, he should be amenable to discipline by his inspector.

For convenience in administration each forest reserve is divided into ranger districts, varying in size according to the needs of the country from 20,000 to 500,000 acres. The forest rangers are really the fingers of the organization. The supervisor is the business manager of the forest reserve, but the forest ranger must do the work. If the forest ranger for a particular district is unable to do the work required of him, it immediately becomes necessary to neglect that district or to hire another man; to follow the first course frequently involves hundreds of thousands of dollars loss by trespass or fire, and to follow the second course involves an otherwise needless yearly expenditure of several hundred dollars for each unsatisfactory ranger.

The forest ranger who is not accustomed to life and work in the woods, who is not physically equal to hard manual labour, to travel, or to fighting fire under adverse conditions, and who is not qualified by experience and ability to manage men, to estimate timber, to do compass surveying, to locate and build trails and bridges, and who has not sufficient education to make intelligent reports is not capable of performing the duties of a forest ranger and is an impediment to the work of the Forestry Branch.

Men who have the above qualifications can be secured in every district in which Dominion Forest Reserves are located, and can be secured for the salaries now paid forest rangers. The only way in which they can be secured is by competitive examination, conducted under civil service regulations. The only way such men can be kept is by giving them permanent employment, and by making it clear that the efficient men will be promoted and that no others will.

The above principles of forest reserve organization are so well recognized that Canada is now the only country in the world which does not select forest rangers by competitive examination and promote them for efficiency.

The average supervisor in the Forestry Branch has charge of an area of over 1,000,000 acres of land. The average forest ranger has charge of over 200,000 acres of land. This land, including the young and mature timber, is worth at least ten dollars per acre. Supervisors are solely responsible for the protection and improvement of over $10,000,000 worth of government property and so long as forest rangers are the only agents upon whom they may rely to get the work done, it will be impossible to throw too many safeguards about the position of forest ranger and of forest supervisor, or to select too carefully the men chosen for the work.

The Dominion Government is lagging behind the Provinces in this respect. The Province of Quebec has established a school for the training of forest rangers. The Province of British Columbia has passed a law providing that all appointments to the Provincial Forest Branch shall be made by a civil service commission and that all appointees shall serve under civil service regulations. It has further been provided that the superior officers of the local Forest Branch shall constitute a civil service commission to appoint and govern all changes in rank, whether to a higher or a lower grade, of the employees of the Forest Branch.

Respectfully submitted,

H. R. MacMILLAN.

No. 3.

REPORT OF A. KNECHTEL.

Department of the Interior,
Ottawa, March 31, 1912.

R. H. Campbell, Esq.,
Director of Forestry,
Ottawa.

Sir,—I have the honour to submit hereby my fourth annual report, which describes the work done on the Dominion Forest Reserves during the year ending March 31, 1912.

There were employed on the reserves four forest surpervisors, eighteen permanent rangers, twenty-eight temporary rangers, who were employed only for the summer months, six forest engineers who are university graduates in forestry, and seven undergraduates in forestry, who assisted in making certain forest surveys. Labourers and fire-fighters were employed as necessities required.

FOREST FIRES.

Generally speaking the summer was rather favourable for the forest reserves in regard to fires. In the danger months of the spring the precipitation was in excess of, and the mean temperature was below the normal. In September and October there was deficiency of rain-fall, but during August there were exceptionally heavy rains, which saturated the ground in the woods so that it remained moist during the fall months.

There were local drouths, however, during which fires occurred in several places. In western Manitoba there was a dry period in the latter part of April and the first part of May, and at this time fire broke out in the Riding Mountain, Duck Mountain and Turtle Mountain reserves.

In May and during the first part of June, there was wet weather in Saskatchewan and Alberta, but this did not extend to the Cypress Hills in the south, and fires there destroyed a large acreage of grass. Nor did the heavy rains of May extend to the northern part of the Rocky Mountains, and there a fire occurred destroying 50,000 feet of spruce timber.

The weather in Manitoba was wet in July, yet during that month four fires broke out on the Turtle Mountain reserve. This reserve is not well wooded. It is mostly covered with grass, with patches of young poplar here and there. There is a comparatively small area covered with large trees, and therefore there is little break to the wind, which on all the prairie provinces has great velocity, and a few fine days at any time during the summer cause the grass to become very dry and fires run through it easily. In the West, on any reserve not well timbered, a fire may occur even when the weather may be considered wet.

NUMBER AND LOCATION OF FIRES.

The forest rangers reported 73 fires as having occurred on the forest reserves during the year as follows: In Manitoba—Riding Mountain, 42, Duck Mountain, 10, Turtle Mountain, 16; in Saskatchewan—Cypress Hills, 3; in Alberta—Rocky Mountain Reserve, 1; in British Columbia—Tranquille Reserve, 1.

The fires in the Riding Mountains occurred in the months of April and May in the following districts: Township 18, ranges 15 and 17; township 19, ranges 16, 17 and 18; township 22, range 26; township 23, ranges 25 and 26; township 24, ranges 25, 26 and 27; and township 25, range 25.

Altogether about 136 square miles were burned over and 2,525,000 feet of saw timber was killed consisting of spruce, tamarack, jackpine and poplar. Young growth, mostly poplar, was destroyed to the extent of twenty square miles. Labour in fighting these fires cost $295.25 as wages, and $132.62 for provisions.

In the Duck Mountains the fires occurred in April and May in the following localities: Township 25, range 28; township 26, range 26; township 27, range 27; township 28, range 27; township 32, range 30; and township 33, range 29. Fourteen thousand three hundred and twenty acres were burned over, 35,000 feet of spruce were killed, and 4,500 acres of young poplar scrub were destroyed.

Besides the above mentioned fires which were on forest reserve property, a fire occurred on Timber Berth No. 986. It burned over an area of about sixteen square miles, but destroyed no merchantable timber. It began in township 26, about the line between ranges 24 and 25, and took a northeasterly course, burning a strip somewhat over a mile wide until it reached township 28, range 24, when it then took an easterly course and stopped close to the range line. Eighty-six men were employed in fighting this fire. The expense was $529 for labour and $198.25 for board.

The total cost of fighting fires during the year on the Duck Mountains was $1,265.05, in wages, $80.75 in provisions and $108.25 in board.

On the Turtle Mountain Reserve fires occurred in April in township 1, ranges 19, 21 and 22, and in July in township 1, ranges 20 and 21. About 4,000 acres of grass was burned. No saw timber was killed, but scattering young poplar which stood over the area was destroyed. The cost of fighting the fires was $45.

On the Beaver Hills Reserve in Saskatchewan a fire broke out, but was fortunately extinguished by the forest ranger before it had done any damage. Two men were prosecuted and fined $100 and costs.

The Cypress Hills in Alberta had three fires on the following areas: Township 8, range 24, west of the 3rd meridian; township 7, range 1, west 4th meridian; and township 7, range 8, west 4th; 15,740 acres of grass was burned. One man was prosecuted and fined $25 and costs for carelessness in leaving a camp fire unextinguished. The cost of fighting the fires was $63.

On the Rocky Mountain Reserve a fire broke out one and a half miles south of Prairie Creek in township 50, range 25, west of the 5th meridian. It covered twenty acres and destroyed 50,000 feet of spruce timber. The ranger extinguished this fire without extra help.

Only one fire is reported from the reserves of British Columbia. On the Tranquille Reserve a small fire broke out but was extinguished before it had caused any destruction of timber. The cost was $78.50 for wages and $17.10 for provisions.

EFFECT OF FIRES.

Fire running through young growth almost invariably kills it. Trees about six inches in diameter at the stump are usually killed, if there is much grass or shrubbery among them, or if they stand close together. They are always killed, as are also much larger trees, if there is much heavy, dry material on the ground. Otherwise, trees twelve inches and over, if they belong to thick barked species such as pine and spruce, frequently escape a ground-fire.

In travelling last summer over the Long Lake and Hat Creek Reserves in British Columbia, I observed that such thick barked species as Douglas fir and bull pine had their bases much blackened by repeated fires; but they were still alive and their foliage was of a healthy colour. There was an absence of trees of pole-wood size; but the ground was in many places covered with a fine growth of young reproduction material. This is evidently repeatedly damaged by fire before it reaches the dimensions of pole-wood.

In the Dominion forest reserves fires run usually on the ground. Crown-fires are by no means frequent. However, a crown-fire sometimes gets started in the foliage of young jackpine and spruce standing close together and causes much damage. Some large areas of fine young lodgepole pine in the Rocky Mountains were thus destroyed in 1910.

With repeated fires running through the forest, only trees with strong advantages can survive. Spruce is rather weak. Conifers are reproduced only from seed, and spruce does not bear every year. Besides, the species does not seed early in the life of the tree. Fire makes a good seed-bed, but if it occurs in a year when spruce is not throwing seed, the good bed is of no avail. In the following year the ground will be grown over with grass and various kinds of shrubs. Trees left alive by the fire may then throw seed, but this, falling among grass leaves and shrubs, is likely to perish. Fire going through spruce woods, therefore, often destroys it so that the ground is not again covered with the same species.

Jackpine and lodgepole pine have advantages which permit them to hold possession of the soil for a much longer period than spruce. They bear seed early. The cones remain on the trees for a long time, sometimes ten years without shedding the seed, which retains its vitality. A fire going through the woods may kill every tree, but it makes a good seed-bed and opens the cones, and soon the ground becomes covered with a growth of young pines so dense that one can penetrate the thicket only with great difficulty. On account of these advantages the jackpine in Northern Ontario and the lodgepole pine in the Rocky mountains have taken possession of very large areas formerly occupied by spruces, firs and other pines.

Poplars and white birch trees have some strong advantages over the evergreens. They seed oftener. The seeds germinate and grow freely, while the evergreens require a good seed-bed. But the greatest advantage they have is that they reproduce from the root. Therefore, if poplar and white birch get full possession of the ground they are likely to hold it. They have a great disadvantage, however. They are very subject to attack by fungi. This is especially true of the poplar. Therefore, if an even mixture of these and evergreens gets started, the evergreens are likely to persist, and by throwing much shade give good conditions for the fungi to attack the broad-leaved trees. Under such circumstances the mixture is likely to become gradually more evergreen.

RANGERS' PATROLS.

The rangers' duties necessitate that they should do much travelling. Besides superintending development work on the reserves, as described in this report, they moved about on the lookout for fires and trespass. In the spring of 1911, they also granted requisitions for timber to be taken from the reserves and for this purpose they met the settlers at appointed places. During the year the average distance travelled in the discharge of such duties was 3,489 miles per ranger.

FIRE NOTICES POSTED.

During the year, 2,855 fire notices were posted on the forest reserves as follows: Riding Mountain, 575; Duck Mountain, 719; Porcupine, 44; Spruce Woods, 19; Turtle Mountain, 120; Moose Mountain, 11; Beaver Hills, 290; Cooking Lake, 54; Rocky Mountain, 593; Long Lake, 43. Total, 2,468.

BURNED GUARDS.

During the spring of 1911, one hundred and twenty-nine miles of fire-guard were made along the boundaries of the reserves by burning out the sloughs, as follows: Along the Riding Mountain Reserve, 8 miles; Duck Mountain, 12 miles; Porcupine, 84 miles; Beaver Hills, 18 miles; Pines Reserve, 7 miles. The cost of burning was $50.

PLOUGHED GUARDS.

One hundred and eighty-eight and one quarter miles of ploughed guard were made along the boundaries of the forest reserves at an average cost of $11.10 per mile, the average width being 11·5 feet as indicated in the following table:—

TABLE OF PLOUGHED GUARDS.

Name of Reserve.	Miles of Guard.	Width in Feet.	Cost.
			$ cts.
Riding Mountain	36¾	10	802 20
Spruce Woods	32	16	359 30
Beaver Hills	16½	8	172 50
Cypress Hills	83	10	617 00
Cooking Lake	13	20	65 00
Rocky Mountains	7	10	63 75
Totals	188¼	Avg. 11½	2,079 75

TRAILS.

Eight hundred and fifty-nine miles of trail were made on the reserves during the summer of 1911 as follows: Riding Mountain, 14½ miles; Duck Mountain, 4; Porcupine Mountain, 63; Moose Mountain, 21; Beaver Hills, 15; the Pines, 28; Cooking Lake, 20; Rocky Mountain, 688½; Long Lake, 5. Trail making consisted mostly in cleaning out old trails, which in many places was equivalent to making them new, as so many trees had fallen across them and so much brush had grown up. These trails facilitate patrol by the rangers and are therefore a means of guarding the forest against fire and trespass. The cost of cleaning out old trails was $1,825.45, of making new, $224.08.

ROADS.

Ninety-nine and one-half miles of wagon road were made through the following reserves: Riding Mountain, 10 miles; Duck Mountain, 10; Moose Mountain, 8; Beaver Hills, 9½; The Pines, 17; Cooking Lake, 1½; Rocky Mountain, 43½. The average width is about 10 feet. On the Moose Mountain, 1,607 yards of grading was done, and on the Rocky Mountain Reserve, 210 yards. Sixteen small bridges were constructed and 92 culverts. The money spent was $2,923.32.

BOUNDARIES LOCATED.

Four hundred and seventy-four and one-quarter miles of boundary line of the reserves was located by the forest rangers. On the Riding Mountain, 122¼ miles; Duck Mountain, 48; Porcupine, 7; Turtle Mountain, 6; Moose Mountain, 1½; The Pines, 42; Cooking Lake, 9; Rocky Mountain, 236½; Long Lake, 2. These lines had been surveyed previously, but many stakes were missing and mounds destroyed.

Triangular reserve stakes marking the boundaries were driven as follows: Riding Mountain, 47, Duck Mountain, 26, Spruce Woods, 10, Turtle Mountain, 11, The Pines, 14; total, 108.

BOUNDARY LINES CUT OUT.

During the year the rangers cut out 76½ miles, 16 feet wide; 11 miles, 12 feet wide; 11 miles, 9 feet wide; and 34¼ miles, 8 feet wide. A ploughed guard ten feet wide was put along 36¾ miles of the 16-foot line. The cutting was distributed on the reserves as follows:—Riding Mountain, 41½ miles, 16 feet wide and 11 miles, 9 feet wide; Duck Mountain, 23 miles, 16 feet wide and 32 miles, 8 feet wide; Spruce Woods, 6 miles, 16 feet wide; Turtle Mountain, 8 miles, 12 feet wide; The Pines, 3 miles, 12 feet wide; Cooking Lake, 6 miles, 16 feet wide; Rocky Mountain, 2¼ miles, 8 feet wide. This gives a total length of 132¾ miles with average width 12·2 feet. The cost was $4,534.25, or $34.16 per mile 12·2 feet wide.

BUILDINGS.

During the summer of 1911 eighteen cabins were built on the reserves for forest rangers. These were erected by the rangers themselves, sixteen on the Rocky Mountain Reserve, one on the Duck Mountain Reserve, and one on the Cooking Lake Reserve. They are made of logs, each 14 feet by 16 feet floor measurement, and have walls 8 feet high. There is a good board floor and board roof, the latter covered with progress sheething.

There are two cabins, however, so far removed from lumber that the ranger was obliged to hew all the material for the floors and roof. These are in the Rocky Mountain Reserve, in a northerly district which lies between the Clearwater and White Goat rivers.

Each cabin contains a stove with cooking utensils, a table, bed, tent, and tools for fighting fire.

In the Rocky Mountains, the cabins are located as nearly as possible thirty miles apart, which is a good day's journey in that mountainous country. Each ranger can, therefore, manage to pass the night with another either north or south of his district.

The cost of erecting these buildings was as follows:—Lumber, $432.76; plaster and paint, $195; labour, $477.97; equipment, $1,367.52; teaming, $417.25. Total, $2,890.50. The average cost per cabin with equipment was $149.86.

A forest ranger's house was repaired in the Riding Mountains, the cost being $295.84. In 1910, the southwest quarter of section 3, township 19, range 18, west of the principal meridian, which lay adjacent to the Riding Mountain Reserve was purchased as a ranger's headquarters. The house, however, was in rather bad condition, but these repairs have made it quite comfortable.

Two houses on the Cypress Hills have, since last spring, been occupied by forest rangers. These formerly belonged to settlers who, with a number of others, were removed from the reserve, the department allowing them recompense for their holdings. So there are now twenty-one buildings on the reserves inhabited by forest rangers.

THE SAWMILLS.

Previous to the winter of 1911 sawmills were not permitted to locate on the forest reserves. My report of 1909 recommended that portable mills should be allowed to enter under certain restrictions stated therein. In the fall of 1910 the department made an attempt to carry the recommendation into effect. The form of contract, however, though allowing a millman to place his mill inside the reserve, did not allow him to do his logging or run his mill before he had received permits from the settlers. As settlers do not, as a rule, apply for permits before February, the mill would have to stand idle until that month. Hence the millmen rejected the contract.

In the fall of 1911, mills were permitted to enter the Riding Mountain Reserve for the purpose of cutting timber that had been killed by fire in the preceding spring. There were about 900 acres in all, in 6 parcels, in township 19, ranges 17 and 18, west of the principal meridian, containing timber estimated at 1,870,000 feet, board measure. The timber was disposed of by tender at an upset price of $2 per thousand feet, and this was about the price bid for it. It was put up in ten lots and disposed of to four purchasers, who were allowed to place their mills within the boundaries of the reserve. No restrictions were placed upon the sale of the lumber.

A sawmill was admitted, also, to cut green spruce on the northwest quarter of section 16, township 22, range 21 west of the principal meridian. This mill is allowed to dispose of lumber only on settlers' permits, but it was permitted to log and saw a quantity of timber not exceeding 100,000 feet board measure in advance of the receipts of permits. This allows the millman to do some of his logging and sawing in early winter.

The privilege to locate this mill was put up by tender, and was disposed of for $50, the successful bidder agreeing to saw spruce, pine, tamarack and balsam fir for $9 per thousand feet, poplar for $10, and other species for $9. As the settler pays for his permit $1.50 per thousand for poplar, and $3 for other species, this, with the millman's charges for logging and sawing, allows the settler his lumber at $11.50 for poplar and $12 for other species—pine, spruce, tamarack and balsam fir.

The mill is under supervision by the department and the logging and sawing are carried on according to approved forestry methods.

A mill in the Cypress Hills Reserve, in Alberta, has been under forestry regulation for three years. I visited this mill in July and found the work being well done.

Only such trees as had been previously marked by the Forestry Branch were being cut; they were being cut down with a saw; stumps were being cut low; tops were being taken out of the woods; the brush was being piled and burned; and altogether the operation was satisfactory. The millman informed me that he was suited with the regulations.

A sawmill was operated also in the Rocky Mountain Reserve under forestry regulations. This was located in Section 28, Township 8, Range 4, west of the 5th meridian. On July 27, 1911, I inspected this milling operation. Although the stumps were not being cut as low as the regulation required, altogether the operation was an improvement upon the old way of lumbering.

LICENSE BERTHS.

The license berths operated on the forest reserves yield to the Department an annual ground-rent of five dollars per square mile, except for lands situated west of Yale in the province of British Columbia, in which case the yearly ground rent is five cents per acre. The dues on timber cut are: sawn lumber, 50 cents per thousand feet, board measure; railway ties 8 feet long, 1½ cents each, 9 feet long, 1¾ cents; shingle bolts, 25 cents per cord; 5 per cent on the sale of all other products excepting slabs and sawdust on which there is no royalty. The following table gives a statement of these berths:—

LICENSE BERTHS.

Reserve.	Province.	Number of Berths.	Area.	Lumber.	Laths.	Royalty.
			Sq. Miles.	Ft. B. M.		$ cts.
Duck Mountain......	Manitoba	14	152·66	11,448,804	....	5,742 36
Riding Mountain.....	"	6	43·75	342,482	....	49 64
Rocky Mountain. ...	Alberta..... ...	32	692·50	11,864,017	815,706	5,151 69
Long Lake...........	British Columbia..	1 pt.	38·50	....	....	....
Totals..........	....	53	927·41	23,655,303	815,700	10,943 69

SAWMILL PERMITS.

In the province of Alberta, permits were granted to cut timber over a definitely described tract not exceeding one square mile on payment of a fee at the rate of $100 per square mile for each permit, a permit being good for one year from date of issue and renewable only once. The royalty dues are the same as those of license berths.

The Rocky Mountain Forest Reserve contains six of these berths, having a total area of 6·87 square miles. From these berths there were cut, during the year, a total of 1,412,667 feet, board measure, of lumber, the royalty from which amounted to $685.74.

SETTLERS' PERMITS.

The following tables give statement regarding the settlers' permits issued on the reserves during the year:—

MANITOBA AGENCIES.

Reserve.	No. of permits.	Lumber.	Logs.	Cord-wood.	Fence posts.	Fence rails.	Roof poles.	Receipts.
Dauphin Agency.		Ft. B.M.	Lineal ft.	Cords.	No.	No.	No.	$ cts.
Riding Mountain.....	780	3,756,613	15,590	4,500	17,550	17,320	8,000	2,176 90
Duck Mountain.......	296	1,484,523	13,530	820	18,150	5,200	10,400	875 97
Brandon Agency.								
Riding Mountain.....	5	38,000	....	15	....	....	....	115 25
Turtle Mountain......	73	23,000	2,064	1,003	500	....	....	105 64
Spruce Woods........	108	5,000	1,700	1,834	700	....	550	131 75
Total....	1,262	5,307,136	32,884	8,172	36,900	22,520	18.950	3,405 51

SASKATCHEWAN AGENCIES.

Reserve.	No. of permits.	Lumber.	Logs.	Cord-wood.	Fence posts.	Fence rails.	Roof poles.	Receipts.
		Ft. B.M.	Lineal ft.	Cords.	No.	No.	No.	$ cts.
Yorkton Agency.								
Duck Mountain......	27	107,070	5,300	20	600	....	....	21 75
Beaver Hills..........	35	....	3,000	378	....	....	....	12 25
Estevan Agency.								
Moose Mountain......	84	....	820	1,259	750	900	1,050	121 10
Moose Mountain......	2	....	....	14	....	....	....	4 00
[1]Prince Albert.......	....	....	....	....	....	....	....	....
Total	148	107,070	9,120	1,671	1,350	900	1,050	159 10

[1] Not reported.

ALBERTA AGENCIES.

Reserve.	No. of permits.	Lumber.	Logs.	Cord-wood.	Fence posts.	Fence rails.	Roof poles.	Receipts.
Edmonton Agency.		Ft. B.M.	Lineal ft.	Cords.	No.	No.	No.	$ cts.
Cooking Lake........	20	18,500	14,750	120	2,820	8,200	1,900	15 00
Lethbridge Agency.								
Rocky Mountain.	14	....	11,500	85	1,700	3,900	1,850	23 50
Medicine Hat Agency.								
Cypress Hills.........	308	....	423,665	4,908	75,500	160,995	61,558	90 00
Total	342	18,500	449,915	5,113	80,020	173,095	65,308	128 50

SUMMARY OF SETTLERS' PERMITS.

Reserve.	No. of permits.	Lumber.	Logs.	Cord-wood.	Fence posts.	Fence rails.	Roof poles.	Receipts.
		Ft. B.M.	Lineal ft.	Cords.	No.	No.	No.	$ cts.
Manitoba Agencies. ..	1,262	5,307,136	32,884	8,172	36,900	22,520	18,950	3,405 51
Saskatchewan Agencies	148	107,070	9,120	1,671	1,350	900	1,050	159 10
Alberta Agencies......	342	18,500	449,915	5,113	80,020	173,095	65,308	128 50
Total......	1,752	5,432,706	491,919	14,956	118,270	196,515	85,308	3,693 11

TOTAL OUTPUT OF THE DOMINION FOREST RESERVES.

—	Lumber.	Lath.	Logs.	Cord-wood.	Fence posts.	Fence rails.	Roof poles.	Receipts.
	Ft. B. M.	Pieces.	Lineal ft.	Cords.	No.	No.	No.	$ cts.
License Berths..........	23,655,303	815,700	....	....	....	....	....	10,943 69
Sawmill Permits..	1,412,667	....	....	....	....	....	......	685 74
Settlers' Permits........	5,432,706	....	491,919	14,956	118,270	196,515	85,308	3,693 11
	30,500,676	815,700	491,919	14,956	118,270	196,515	85,308	15,322 54

TIMBER SEIZURES.

The following table shows the timber seizures made by the forest rangers during the year:—

Reserve.	No. of Seizures.	Lumber.	Logs.	Cord-wood.	Fence posts.	Fence rails.	Roof poles.	Dues.
		Ft. B. M.	Lineal ft.	Cords.	Pieces.	Pieces.	Pieces.	$ cts.
Riding Mountain.......	33	431,976	500	173	1,970	....	420	3,637 00
Duck Mountain........	11	112,783	1,504	....	....	9	... .	759 63
Spruce Woods.........	2	....	26	17	500	....	... .	148 00
Beaver Hills......... ...	7	....	1,880	5	....	....	....	13 00
Cooking Lake.......... .	1	....	560	....	....	....	... .	10 00
Rocky Mountain.......	1	....	....	10	....	....	....	5 00
Total	55	544,759	5,470	205	2,470	9	420	3,972 63

HAY PERMITS ISSUED.

The following table shows the number of hay permits issued on the various reserves:—

Reserve.	No. of Permits.	Tons Cut.	Revenue.
			$ cts.
Riding Mountain	50	750	100 00
Turtle Mountain...........	33	615	77 00
Spruce Woods.......	15	260	33 50
Beaver Hills....	8	104	14 40
Moose Mountain............	26	660	79 00
Cooking Lake......	15	298	170 25
Cypress Hills...........	48	1,848	162 00
Total..............................	195	4,535	632 15

FOREST SURVEYS.

A forest survey of the Porcupine Hills in southern Alberta was made by Forest Engineer E. G. McDougall with a party of three forest assistants. The object of the survey was to determine what lands should be set aside as a forest reserve. Attention was given, therefore, chiefly to the location of a boundary line, although a cursory description was made of the interior. As a result Mr. McDougall recommended that the reserve should consist of 198½ square miles. The fifth meridian line runs through this territory, 53 square miles lying east of that line and 145½ miles on the west side. The most southerly boundary is located two miles south, in township 9, and the most northerly, five miles north in township 13.

Sixteen quarter-sections are described as homestead sales and patents, and four as irrigation lands. Thirty-seven and one-quarter square miles are in grazing leases. Six square miles are otherwise disposed of. The cost of this survey was $2,021.82.

Mr. W. J. Van Dusen, of the Forestry School of the University of Toronto, supported by three forestry undergraduates, made a survey of a tract of land adjacent to the Porcupine Reserve in Manitoba with the object of determining what portions should be added to the reserve. Mr. Van Dusen's report recommends the addition of 428½ square miles of land which is wooded with jackpine, and is of no agricultural value. This area is a semi-circular strip touching the Canadian Northern Railroad at twelve points, the arms reaching the boundary between Manitoba and Saskatchewan, the arm at the north extending into Saskatchewan three-fourths of a mile. The survey cost $2,055.58.

GRAZING.

An area of 45¾ square miles, consisting of all of township 1, range 21, and part of township 1, range 22, in the Turtle Mountain reserve, was, in the summer of 1911, fenced for grazing. This is an admirable tract for such purpose, being well watered, and covered with a dense growth of long grass and pea-vine. It is not good farming land, as it consists of heavy clay, and has an elevation of about 2,500 feet above sea level.

Throughout the area young poplars have sprung up, but these have not been allowed to grow to large size on account of fires which have run over the ground every two or three years. Fires have been facilitated by the long grass, and these have not been confined to this area, but have extended and destroyed much large timber. It was thought advisable, therefore, to encourage grazing and for this purpose the fence was constructed.

The fence has a length of 19¼ miles. It has four strands of heavily galvanized hard steel number 9 wire. The bottom wire is strung fifteen inches above the ground, and the wires are placed eleven inches apart with upright or stay wires 22 inches apart. At every eighty rods there is a steel post, and the fence is strongly braced at a distance of every forty rods, the braces being round oak 9½ feet long. There are 6,000 fence posts. They are of oak and willow six feet long and not less than three inches at the small end. Anchor posts are of oak, six inches at the top and eight feet long.

The total cost of constructing the fence was $3,344.52, of which $54.40 was paid for advertising; $600 for wooden posts; $40 for iron posts; $239.28 for anchor posts and bracing timber; and $2,410.84 for wire and labour.

As regards grazing regulations:—

The number of stock which may be grazed upon the said tract and the period during which grazing will be permitted shall be determined each year by the Director of Forestry.

Subject to the approval of the Director of Forestry, the forest ranger or other officer in charge of the reserve shall fix a date before which all applications for grazing permits shall be submitted, and any applications received after the date fixed shall be entitled to consideration only after the applications received prior to such date have been satisfied or disposed of. Due notice of the date fixed shall be given at least thirty days before such date by advertisement in a newspaper circulating in the district.

Applications for grazing permits must be made on the form prescribed for that purpose and must give a sufficient description for identification of the stock, including the marks and brands when there are such.

Bona fide residents in the vicinity of the reserve will be given preference in the granting of permits.

The number of stock to be grazed and the period of grazing is to be determined each year in advance by the Director of Forestry.

A date is fixed each year before which applications for grazing are received. Thirty days notice is advertised.

Marks and brands of stock must be given in application forms.

Dues are twenty-five cents per head per month or one dollar for the season payable in advance, only stock six months old or over being counted.

Permits are granted only for the exclusive use of the owners of stock and are not transferable.

Any stock removed before the expiration of the permit may be replaced by other stock, to an equal number, which are owned by the permittee.

Permittees must remove their stock within seven days after the expiration of the permit.

Permittees must salt their stock regularly and must remove the carcasses of animals which die.

The Department does not hold itself responsible for damage caused by stock escaping from the enclosure.

If grazing interferes with the production of wood the Minister of the Interior may order grazing to cease.

Permittees are required to aid in extinguishing fires in the tract within which permits are granted.

There are excellent large grazing areas in the Riding Mountain, Beaver Hills, and Rocky Mountain Forest Reserves, but unlike the Turtle Mountains, settlers in the vicinity are not numerous. Hence the necessity for fencing grazing areas on these other reserves is not very apparent. Possibly on the Porcupine Hills of Alberta this might be practicable as they are now occupied by a large number of ranchers.

Grazing on all such areas should, however, be governed by the Department in such way that each permittee would be assured of having sufficient grass for his stock. On the Porcupine Hills, some arrangement should be made whereby each permittee should have the privilege of grazing a definite area. A settler, for instance, whose property adjoins the forest reserve should have the exclusive privilege of grazing a definite area close to his home. Otherwise a rancher with a large number of cattle might herd his stock upon the tract and compel the settler to graze his stock at some distant place.

HAY.

The Cypress Hills Reserve consists of two distinct portions, the larger extending from the western side of Township 8, Range 3, west of the fourth meridian, eastwardly to the eastern side of Range 29, west of the third meridian, the average width being five miles. A smaller portion lies eleven miles distant in an easterly direction and has a length of seven miles and a width of five miles. This smaller portion should have a distinctive name. It might be called, for instance, the Maple Creek Reserve, as it lies due south of Maple Creek Station. The smaller area is quite well timbered, but the larger tract is mostly denuded, the greater proportion of it consisting of hay land.

This reserve lies in a wide stretch of country, formerly occupied for ranching, but now broken up by settlers who are trying to farm it. The region has an annual precipitation of less than ten inches, which is not sufficient for successful farming. Ordinarily it does not produce grass enough for the settlers' stock. Therefore, every summer large quantities of hay are cut on the reserve and hauled down to the farms. In 1910, many settlers who fed their stock with this hay would, without it, have been obliged to sell them at a sacrifice.

It seems to me that this hay land should be left as such. The area should not be broken up in an attempt at reforestation. The requisitions and permits for hay should, however, be managed differently. The regulations now allow requisition to be made at any time after the first day of January, and permits may be granted at any time after the first day of April, though the cutting of hay is not permitted before the twenty-fifth day of July. On April 1, there is no indication as to how much hay a given area will produce during the summer, and it would seem that the first of June would be early enough for the applications to be received, and the first of July for the permits to be granted.

REFORESTING.

To obtain seed for reforesting purposes and for the Nursery Station at Indian Head, Saskatchewan, the forest rangers collected cones as follows:

In June, jackpine on the Pines Reserve and lodgepole pine on the Cypress Hills; in July, white spruce on the Pines and Spruce Woods reserves and jackpine on the Riding Mountains; in August, spruce cones on the Spruce Woods, Riding Mountain and Duck Mountain; and in September, tamarack on the Porcupine Reserve in Manitoba and bull pine on the Monte Hills in British Columbia. The jackpine and lodgepole pine cones were those of the previous year. All others were cones of 1911.

It will be observed that cones mature earlier in the prairie provinces than in the East. In Manitoba and Saskatchewan spruce cones are collected in July. In Ontario and Quebec they are obtained in September, in some years even during the latter end of the month.

The cones were nearly all shipped to the Nursery Station at Indian Head, where the seed was extracted by Mr. Norman Ross. His report states that the freight on the cones cost $177.33, and labour $132.22. However, Mr. J. D. Kirkwood extracted the seed on the Spruce Woods Reserve from 60 bushels of cones collected there.

The following is a summary of the cones and seed collected during the season with the cost of the same:—

Species.	Bushels of Cones.	Cost of Cones.	Cost per Bushel.	Pounds of seed.	Cost per Pound.
		$ cts.	$ cts.		$ cts.
Jackpine	186·5	267 95	1·437	47	6 70
Lodgepole Pine	100·0	90 40	0·904	28	4 23
Bull Pine	38·0	15 00	0·394	33	1 45
White Spruce	193·0	254 85	1·31	177	2 44
Tamarack	24·0	77 00	3·21	5	16 40
Total	541·5	705 20	[1]	290	[2]

[1] Average cost per bushel 91·45 cents. [2] Average cost per lb. 6·24 cents.

The cost of seed per pound is almost as much as if it had been purchased in the market. The following prices per pound were taken from the catalogue of Thos. Meehan & Sons for 1911-12:—Jackpine, $5.50; lodgepole pine, $6; bull pine, $2.25; white spruce, $3.25; tamarack, not quoted.

In the prairie provinces, cones yield a small quantity of seed as compared with the eastern provinces and eastern states, and this is a cause of increased cost. In New York State, a bushel of green spruce cones will yield 1½ pounds of seed, while spruce collected last summer in Manitoba and Saskatchewan yielded little more than nine-tenths of a pound per bushel. It will be observed from the table above that 24 bushels of tamarack cones yielded only 5 pounds of seed.

The freight, too, being $177.33 and the quantity of seed being 290 lbs., 61 cents of the cost per pound represents freight.

Seeds of each species were sent to Mr. George H. Clarke, seed commissioner, of Ottawa, who tested them for germination. The conditions in the test were arranged somewhat similarly to those which the seeds would have in a nursery bed, but much more favourably. The seeds were placed in sand a short distance below the surface. The moisture was kept uniform. The temperature was between 20 and 30 degrees centigrade. After 16 days the germination was as follows:—

Jackpine, 48 per cent; lodgepole pine, 45 per cent, bull pine, 39 per cent; white spruce, 33 per cent and tamarack, 31 per cent.

Last spring the ranger on the Spruce Woods Reserve made five nursery beds near Onah station as follows: Jackpine, 1; lodgepole pine, 2; bull pine, 1; European larch, 1, and Douglas fir, 1. At Shilo station he also made ten beds as follows: Lodgepole pine, 4; bull pine, 4; black spruce, 1; Douglas fir, 1. He sowed also 173 rows of bull pine with the garden seeder.

The beds are each 4 feet by 12 feet. They are boxed, covered with screens to keep out the birds and lath screens for shade. They were kept clean of weeds and were watered during dry spells from a well dug last summer on the nursery.

The rows of bull pine are twelve feet and are spaced one foot apart. The ground for them was well prepared. They were kept weeded, but were not watered.

On July 1, the nursery was placed under charge of Mr. J. D. Kirkwood, who took care of it for the remainder of the year. Last fall the beds of pine were in excellent condition. There had been very little loss during the summer. Some beds began to 'damp off,' but the trouble was promptly checked by Mr. Kirkwood, who sprinkled dry wood ashes over them. The spruce was also good, but the Douglas fir and European larch had not germinated. These seeds may come through this spring.

On the Cooking Lake Reserve an acre of ground was ploughed with furrows placed about four feet apart, the soil being turned to the north side. These were sown alternately with the seed of bull pine and lodgepole pine. The seed was placed close in to the sharp angle of the furrow. This seeding was quite satisfactory, the little trees standing thick along the furrows excepting in very low places, where, as the season was very wet, the trees were drowned out. This reserve is excellent ground for reforesting, and it may be possible to put evergreens upon it in this way. This, however, can be determined only by trial through three or four years.

The forester also hacked up twelve spots four feet wide by eight feet long among poplar trees. Six were sown with bull pine and six with lodgepole pine seed. The bull pine came well on high land but was poor on wet ground. The lodgepole pine was good.

A nursery made on the Cooking Lake Reserve was rather a failure owing to the soil being acid. Ash and European larch seed germinated and grew through the season, but spruce and pine seed did not germinate.

On the Moose Mountain Reserve nursery beds were made as follows: one bed of bull pine sown in rows; two beds of lodgepole pine and one bed of spruce, sown broadcast. The bull pine and spruce sowing resulted quite well. One bed of lodgepole pine was good and the other hardly fair.

On the Riding Mountain Reserve a seed-bed did not result successfully, but some seed sown with the garden seeder turned out quite well.

The total cost of nursery work was $1,583.05.

SUMMER RESORTS.

During the summer of 1910, a pleasure resort was located on the shore of Arbor Island in Lake Max, Turtle Mountain Reserve, and last summer 41 lots were surveyed under the direction of the Surveyor General. A shore allowance was left 66 feet wide. Streets were also made of a width of 66 feet. Lots were as nearly as possible laid off with a frontage towards the water of 100 feet and a depth of 150 feet. A lane was added at the rear of the lots.

Arbor Island is an excellent one as a summer resort, being densely wooded with oak, ash, birch and poplar. Eight families had, previous to the survey, erected cottages upon it. Previous to the occupancy of the island as a summer resort there was no fishing in the lake, but three years ago pike were transferred from Lake Oscar which lies a short distance from Lake Max.

On the shore of Fish Lake in the Moose Mountain Reserve a resort was laid off in three portions, on Arcola Bay, Sandy Beach and Moose Bay, respectively. The one on Arcola Bay is the largest, consisting of 65 lots. Along the shore is a road allowance of 66 feet or more, called Arcola Avenue. Parallel with this and back from it about 150 feet runs Arbor Avenue, also 66 feet wide. Still 150 feet further back runs a lane 20 feet wide parallel with the avenues. Extending from the lane to the shore are six cross streets 66 feet wide named after trees: Elm, Birch, Aspen, Ash, Maple. The lots are about 50 feet wide by 150 feet deep.

The Sandy Beach portion is laid off in 30 lots adjoining Sandy Beach Avenue, which is 66 feet wide and runs along the shore. There is just one row of lots, at the rear of which runs a lane. Five cross streets are named after various species of fish—Jackfish, Pickerel, Pike, Minnow, Bass.

Moose Bay portion consists of 42 lots in two rows. Moose Avenue runs along the shore, Elk Avenue behind the first row of lots, and a lane behind the second row. Three cross streets are called Beaver, Mink and Porcupine.

On the Moose Mountain Reserve are more than one hundred lakes and ponds of which Fish Lake is the largest. It has a length of about three miles and a width of about two miles. The outline is much broken and the shores are well wooded with poplar. Pike and pickerel abound in its waters. Good roads lead to it from Carlyle and Arcola. The shore has been used as a tenting ground by pleasure seekers for several years.

Respectfully submitted,

A. KNECHTEL,
Inspector of Forest Reserves.

No. 4.

REPORT OF N. M. ROSS.

Department of the Interior,
Forest Nursery Station,
Indian Head, Saskatchewan, March 31, 1912.

R. H. Campbell, Esq.,
Director of Forestry,
Ottawa, Ont.

Sir,—I have the honour to submit herewith my twelfth annual report, dating from March 31, 1911.

Throughout the three prairie provinces the weather conditions during the past season have been exceptionally favourable to the work of the Tree Planting Division. With the exception of a comparatively small portion in Southern Manitoba, the precipitation throughout the West was above the average. In all districts, with the exception of part of Southern Manitoba—which suffered again from drought,—the plantations, especially those newly set out, have, from the inspectors' reports, done exceptionally well. The season of 1910, it will be remembered, was a very trying one, nearly all districts suffering badly from lack of rain, and, as a consequence, trees set out in that season made practically no growth and the percentage of failures was high. These plantations, however, all came along splendidly last summer; the snowfall last winter (1910-11) was extremely heavy, providing ample moisture for all spring planting, while during and immediately after the planting season frequent rains and cool weather produced ideal conditions. Although the fall was exceptionally wet, for some reason active growth did not continue too late, and there appears to have been no damage caused by freezing of immature growth. The soil throughout the West generally was well soaked with moisture at the time of freezing up. It is fortunate that this was the case as the snowfall during the winter has, as a general thing, been very scant, exposing large bare surfaces from which a great deal of moisture must have evaporated. We do not anticipate any abnormal damage from winter-killing as a consequence of the light snowfall, except perhaps in the case of half-hardy stock.

On the Nursery Station growth both in the nursery plots and in the various plantations was exceptionally good. The transplanting operations with seedling conifers were. this year, particularly successful.

At the end of March, 1911, Mr. Arch. Mitchell, who had been connected with the Tree Planting Division for several years, first as Tree Planting Inspector and later as Assistant in the Tree Planting Division, resigned his position. Mr. Mitchell is probably more familiar with general conditions affecting tree-culture in Alberta than any other person, and, as these conditions are particularly trying and of peculiar local character, his resignation will be particularly felt in connection with our work in that province.

Mr. S. S. Sadler, a graduate of the University of Toronto Forest School, was appointed a month or so later to fill the position left vacant by Mr. Mitchell's resignation.

INSPECTION WORK.

During the summer months, inspection work was undertaken by the following members of the staff: Messrs. S. S. Sadler, A. P. Stevenson, John Caldwell, Angus Mackintosh, W. Guiton, Jas. Kay, Jas. N. B. McDonald, Wm. Macdonald, Jas. Cowie and Geo. Kennedy. The reports of these inspectors are appended herewith.

The following table gives a comparative statement, for the past three years, of the number of trees distributed and the number of applicants:—

—	1910.	1911.	1912.
Number of applicants on inspectors' books	8,318	8,036	7,375
Number of applicants to receive trees	3,173	3,285	3,618
Number of trees distributed	2,533,600	2,636,100	2,729,135
Number of new applicants	3,832	2,656	1,649

From this table it will be seen that, though the number of new applicants is decreasing, the number of settlers supplied with trees is increasing and the number of trees sent out is also slightly increasing. Settlers are becoming more familiar with the regulations governing our distribution and are realizing that their ground must be in a certain condition before trees will be granted. Therefore, a very much smaller percentage of applications is received now from those not having soil properly prepared than has been the case in past seasons. Undoubtedly, too, more applications would have been received had the conditions of the past season been more favourable for farming operations.

OFFICE WORK.

The table given below summarizes the work done in the Indian Head office of the Branch:—

——	April 1, 1910 to Mar. 31, 1911.	April 1, 1911 to Mar. 31, 1912.
Number of planting plans prepared	2,778	3,004
Number of pieces of mail received	14,492	12,249
Number of pieces of mail sent out	[1] 19,402	[1] 20,332
Number of new files added	3,969	2,696

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[1] This does not include bulletins, these being sent out from the office at Ottawa.

This table shows work handled in the office during the past two seasons. It will be noted that there has been a falling off in the number of pieces of mail received, and, naturally, a corresponding decrease in the number of new files added. This, we think, is not due to any lack of interest in the work but to two causes, viz.: the exceptionally unfortunate conditions affecting farm operations during the latter part of the season, and the fact that the usual advertisements and posters calling attention to the free distribution were not published until very late and the agricultural papers were not used as freely for advertising purposes as in past seasons.

The position in which a majority of western farmers are placed, owing to the late harvest and unfavourable threshing season, followed by extreme difficulties in marketing their crops, has undoubtedly had its effect in reducing the number of new applications. The average farmer has, this spring, more than the usual amount of work to overtake, and in many cases financial considerations due to the loss of crop or low-grade grain make it almost impossible to devote time or money to tree planting this season.

EXHIBITS.

As in past seasons exhibits were made at the summer fairs held at Calgary and Brandon, the inside exhibits being supplemented by small plots planted to show varieties best adapted to the local conditions and simple nursery operations suitable to farm requirements.

LECTURES.

Mr. A. P. Stevenson attended a number of Farmers' Meetings in Saskatchewan during the months of January and February, delivering lectures on the work of the Tree Planting Division and tree-culture generally. I personally attended meetings at Gull Lake, Wolseley and Winnipeg.

NURSERY WORK.

For general nursery work at this point conditions on the whole have been particularly favourable. The growth of all stock was strong and slightly above the average. Our acreage to maple was considerably smaller than usual, but, as it was absolutely impossible to obtain seed of this species, this was unavoidable. The crop of ash seedlings (two years old) is very small as compared with the acreage. The reason for this, as mentioned on page 95 of last year's report, is the very severe frosts which occurred late in the spring of 1910. These frosts destroyed at least fifty per cent of the freshly germinated seedlings.

The worst feature of the past season in relation to the nursery work was the exceptionally early freeze-up. It was impossible to work on the land after October 24, which is about the date we have heretofore commenced sowing our fall seeds, such as ash. We find it a great advantage to sow this species in the fall, not only because it makes less work in the spring, but particularly for the reason that we get a very much better germination than from spring sowing, and usually the stock is larger and better rooted.

The following areas were devoted to the different varieties:—

Broad-leaved—		
Maple, 1 year	10 acres.	
Ash, 1 year	20 acres.	
Ash, 2 years	20 acres.	
Caragana, 1 year	2 acres.	
Willow (cutting stock)	5 acres.	
Russian poplar (cutting stock)	2 acres.	
Ornamental stock [1]	½ acre.	
		59½ acres.
Conifers—		
Transplanted tamarack	1 acre.	
Transplanted evergreen conifers	5 acres	
Conifer seed-beds	1¼ acres	7¼ acres.
Total area under nursery		66¾ acres.

The following stock is available for distribution this spring:—

Deciduous—		
Maple, 1 year	559,100	
Ash, 2 years	255,675	
Caragana, 1 year	212,500	
Russian Poplar (cuttings)	195,400	
Willow (cuttings)	1,218,625	
Cottonwood (imported)	300,000	
Tamarack	24,460	
Siberian Larch	3,820	
Norway Poplar (cuttings)	3,850	
		2,773,430
Evergreen—		
White Spruce, 5 years, transplants	25,006	
Norway Spruce,[2] 5 years, transplants	24,870	
Colorado Spruce, 7 years, transplants	3,354	
Lodgepole Pine, 4 years, transplants	10,017	
Jackpine, 4 years, transplants	9,242	
Balsam Fir	320	72,809
Total		2,846,239

Some of the above stock will be required for extending our own plantations.

Tree-digging was commenced September 23, and completed October 21.

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[1] Shrubs being grown are for shipment to Buffalo Park, Wainwright, for ornamental planting there.

[2] Variety of Norway spruce (Picea excelsa septentrionalis) seed, supposed to have been collected in Northern Finland, and should therefore prove a considerably more hardy strain than the common Picea excelsa.

All Russian poplar cuttings and over 600,000 willow cuttings were made up before winter set in. These are counted and tied in small bundles and completely buried outside for winter storage. About 600,000 willow cuttings will remain to be made this spring before the packing season opens.

COLLECTION OF SEED.

The past season was a particularly good seed-year for practically all species, and every endeavour was made to procure as large stocks of seed as possible, particularly maple and ash, in case of a short seed-crop this year.

Elm.—In the month of June, 35 lbs. of this seed were secured from Winnipeg, while 40 lbs. were collected from trees growing on the Experimental Farm. We have experienced considerable difficulty in recent seasons, in getting this seed collected at a proper stage of maturity. In nearly every case seed is picked too green, and, as a consequence, poor stands in the nursery plots are the result. The great trouble in this connection is the fact that our strong winds strip most of the seed from the trees before it actually has a chance to ripen.

Caragana.—One hundred and ten pounds of this variety were collected from the shrubs on the Nursery Station. This was sown on three acres, at the rate of about 37 lbs. per acre.

Maple.—Three hundred and twenty-seven bushels of this seed were collected in the Qu'Appelle valley, in the neighbourhood of Fort Qu'Appelle.

Green Ash.—Two hundred and forty-eight bushels were collected in the Qu'Appelle valley.

Cones of the following conifers were collected on the various reserves under the direction of the forest rangers and shipped to this point, where seed was extracted during the past winter:—

—	Number of Bushels received.	Lbs. of Seed extracted.	Average per Bushel.
	Bush.	Lbs.	Lbs.
Lodgepole Pine	97	38	0·39
Jackpine	182	57	0·31
Bull Pine	27	33	1·22
White Spruce	135	170	1·33
Tamarack[1]	15	10	0·60

[1] Cones in poor condition when picked, many seeds having already been lost.

CONIFERS.

Seed-Beds.—Four thousand five hundred square feet of seed-beds were sown, the varieties being Scots, jack and lodgepole pine and white spruce. Small quantities of *Picea obovata, Picea excelsa borealis, Abies siberica, Juniperus communis* and Tyrolese larch were also sown for experimental purposes.

Seed-beds sown in 1910 all show particularly good stands of strong, vigorous seedlings. The majority of these will be transplanted this spring (1912).

Transplants.—Last spring was very much more favourable for transplanting than that of 1910. As a consequence the percentage of failures was very low.

The following are the varieties and numbers of seedlings transplanted, practically all two-year stock:—

Scotch pine	5,380	
Lodgepole pine (P. Murrayana)	96,790	
Jackpine (P. Banksiana)	66,240	
Bull pine (P. ponderosa)	9,510	
White spruce	18,760	
Abies concolor	1,700	
Flexilis pine	245	
Siberian larch	555	
Norway spruce (Russian seed)	4,280	
		203,460

PERMANENT PLANTATIONS.

The trees in the permanent plantations are making excellent growth. These plantations were started in 1904 and have been added to each season. At present these plantations occupy 78¼ acres. The separate plantations vary in size from one-half acre to over four acres. Twenty-three species and varieties are represented in these plantations.

Measurements were again made in these plantations in November, 1911, of the varieties planted in 1906. Of the varieties planted in 1906 it is interesting to note the relative growths made to date under similar conditions of soil and cultivation. The measurements are averages of from 100 to 150 individual specimens in each case. The average and maximum measurements are given below:—

GROWTH OF PLANTATION SET OUT IN 1906.

Species.	Size when planted.	Average Height, Nov., 1911.		Maximum Height, Nov., 1911.	
		Ft.	In.	Ft.	In.
Tamarack	15-in. forest seedlings	12	11	16	0
Scots Pine	10-in. 4-yr. transplant	5	11	9	10
White Spruce	10-in. 5-yr. transplant	3	0	6	8
Cottonwood	18-in. seedlings	18	2	22	6
Manitoba Maple	14-in. 1-yr. seedlings	13	9	18	2
White Birch	18-in. 2-yr. "	12	4	16	0
Green Ash	12-in. 2-yr. "	8	3¾	11	0
American Elm	15-in. 2-yr. "	8	2	10	6
Russian Poplar	24-in. 1-yr. rooted cuttings	18	10	22	6

Last spring the following plantations were set out:—

4 acres Colorado spruce equally mixed with caragana.
2 acres red or Norway pine equally mixed with caragana.
1 acre jackpine equally mixed with Manitoba maple.

The spacing throughout was 4 feet by 3 feet 6 inches.

If time permits, plantations of Siberian larch and Norway poplar will be set out this spring.

It is very generally supposed that the transplanting of evergreens is more difficult than that of deciduous varieties, and that there is usually a much greater percentage of loss. In this connection the figures given in the table below may be of interest. Actual count was made in November, 1911, of every individual tree planted in 1910 and 1911, with the following result:—

	—	Total Number planted.	Number dead in Nov., 1911.
Trees planted, 1910:	Caragana	3,960	758
	Scots Pine	4,050	455
	Manitoba Maple	2,340	390
	Scots Pine	2,430	224
	Caragana	5,012	717
	Norway Spruce	5,272	131
Trees planted, 1911:	Colorado Spruce	2,300	0
	Manitoba Maple	2,300	35
	Colorado Spruce	3,629	0
	Caragana	3,629	28
	Jackpine	1,250	232
	Maple	1,256	7

In the last plantation (jackpine and maple) the comparatively large number of deaths was due to the effects of alkali in the soil. It would appear from experience covering the past eight years that the very slightest trace of alkali in the soil is fatal to all the pines (Scots, jack and lodgepole). The spruces on the same soil do not seem to be affected, though it is not suggested that they would be suitable for what is usually known as alkali soil. Even the smallest trace of alkali—so slight in fact as to be quite unnoticeable from its effects on grain crops, or other trees—will immediately cause the needles of the pines to become yellow; the growth is stunted and sickly and the tree rarely survives more than a few seasons.

VARIETY PLOTS.

The following were added to the variety plots last season:—

Manitoba maple *(Acer negundo).*
Soft maple *(Acer saccharinum).*
Green ash *(Fraxinus pennsylvanica* var. *lanceolata).*
American elm *(Ulmus americana).*
Aspen poplar *(Populus tremuloides).*
Balsam poplar *(Populus balsamifera).*
Lombardy poplar *(Populus nigra* var. *pyramidalis).*
Norway poplar.
Carolina poplar *(Populus deltoides* var.*)*
Cottonwood *(Populus deltoides).*
Russian poplar *(Populus certinensis).*
Russian poplar *(Populus Petrofski).*
Golden willow.
Acute-leaf willow *(Salix daphnoides).*
Diamond willow.
French laurel-leaf willow *(Salix pentandra).*
Purple willow *(Salix purpurea).*
Britzensis willow *(Salix alba britzensis).*
White willow *(Salix alba).*
Russian laurel willow.
Austrian pine *(Pinus laricio austriaca).*
Japanese larch *(Larix leptolepis).*

These plots contain 100 specimens of each variety planted four feet apart each way.

ORNAMENTAL GROUNDS AND SHRUBBERY.

Owing to the unusual precipitation, the lawns and flower-borders presented a splendid appearance throughout the season. There was a particularly fine show of bloom on the early flowering shrubs, such as lilac, Tartarian honeysuckle, spirea arguta, etc.

PLOUGHING AND FARM WORK.

Work last season was commenced on the southwest quarter of the section, this quarter having been turned over to the nursery in the fall of 1910. That fall a good woven-wire fence on cedar posts was erected and part of the ground, largely covered with a growth of wolf willow, cleaned for breaking. In 1911, sixty acres of this land was broken and backset. Part of this will be seeded to oats during the coming summer and the remainder will be summer-fallowed in order to put it in condition for sowing tree seeds in the fall.

The usual amount of summer-fallow and ploughing was done. Twenty to twenty-five tons of rye grass hay was cut and cured; twenty-two acres was grown to oats, which yielded over 2,000 bushels of grain.

DISTRIBUTION OF CONIFERS.

As stated in my last report it was decided to commence a limited distribution of evergreen conifers, which may be obtained for farm planting at the rate of $1 per 100. Information in regard to this distribution was prepared in the form of a circular, which was sent out as widely as possible. The circular is as follows:—

'DEPARTMENT OF THE INTERIOR, FORESTRY BRANCH.

'It has been decided to distribute, from the Forest Nursery Station, evergreen conifers in limited quantities for planting by farmers in Manitoba, Saskatchewan and Alberta. These conifers will be furnished under the following conditions:—

'1. The applicant must be a bona fide owner of a farm in one of the three provinces mentioned above.

'2. The trees if supplied must be planted on such farm property, and on no account may all or any part of the trees be used for planting on town or village lots, or within the limits of any city, town or village.

'3. The applicant, before any trees are granted, will be required to sign an affidavit that the trees are for planting on his own farm property and will not at any time in the future be removed from the farm for planting elsewhere, nor offered for sale for planting within town or village limits.

'4. The stock offered will be limited in quantity and applications will be booked in the order in which they are received; all applications must be made upon the forms supplied by the Forestry Branch, which may be obtained by writing to the Forest Nursery Station at Indian Head, Sask. The application must be accompanied by a post office or express money order sufficient to cover the number of trees applied for.

'5. The young trees will be supplied at a cost of $1 (one dollar) per hundred, f.o.b., Indian Head. The trees will be packed and delivered at the station for shipment to applicant's express office, the express charges to be paid by applicant upon delivery.

'6. No application will be entertained for less than 100 of any variety; that is, orders will not be filled for, say 50 spruce and 50 pine; but if both spruce and pine should be desired, at least 100 of each must be ordered. No order will be filled for more than a total of 500 trees in one season.

'7. The department does not assume any responsibility regarding the delivery or subsequent growth of the young trees. Every effort will be made to supply first-class stock true to name, and every care will be taken to have the trees well packed and delivered to the express company at Indian Head in good condition for shipping.

'8. All stock is grown from seed at Indian Head; the trees will be from four to six years old, at least once transplanted, and will be of a suitable size for permanent planting. The average height will be twelve inches, though some may possibly run under this and others over.

'READ THE FOLLOWING CAREFULLY.

'Before sending a request for an application form with a view to placing a definite order for evergreens, the applicant should be reasonably sure that his conditions are favourable to growing the trees successfully.

'The ground must be in the best possible state of cultivation, preferably summer fallow.

'Evergreens should be planted as soon as possible after they are dug; they will not stand the same amount of neglect as will the ordinary deciduous varieties. If the applicant lives at a considerable distance from an express office, so that he cannot be promptly notified as to the arrival of the trees, there would be every likelihood of the trees either drying out or becoming heated before delivery could be made, and consequently the purchase price would be so much wasted. This would apply in localities where mail is delivered only once a week, or perhaps only once in two weeks. It is not practicable when shipping to send out notices of intended shipment more than three or four days in advance of the actual shipping date, as the time of shipping depends altogether upon the local weather conditions over which we can have no control.

'Evergreens of the right varieties, though perfectly hardy when once thoroughly established, seem to require some protection for at least two or three years after planting. In most cases it would be a waste of time and money to plant on the open prairie.

'The most favourable situation for planting would be in the vicinity of a well established shelter belt of the ordinary native trees, where the young evergreens may be protected during the winter and early spring by the covering of snow held by the older belt. The trees should not, however, be planted within several feet of the established belt, as during the first few years the growth is small and young evergreens are very sensitive to over-crowding or too close shading by larger trees.

'Evergreens to be most successful should be planted close together, not more than three and a half or four feet apart. Isolated specimens set out singly in the centre of a lawn, or in some other equally exposed situation, are placed under most unfavourable conditions for healthy growth, and unless given special protection during the first few winters will usually fail to survive.

'For further particulars regarding the varieties available for distribution in 1912, and for regular application blanks, apply to:

THE FOREST NURSERY STATION,
INDIAN HEAD, SASK.

'IMPORTANT—No money should be sent to pay for evergreens unless accompanied by application made out on official form. These forms will be supplied upon request. Any money received without an order on the official blank will be returned.'

The demand for these evergreens has been so great that our total stock was very quickly applied for, without any advertising on the part of the department. Many applications latterly had to be refused owing to the supply of stock being exhausted.

Respectfully submitted,

NORMAN M. ROSS,
Chief, Tree Planting Division.

No. 5.

REPORT OF S. S. SADLER.

DEPARTMENT OF THE INTERIOR,
FORESTRY BRANCH,
NURSERY STATION, INDIAN HEAD, SASKATCHEWAN, March 31, 1912.

R. H. CAMPBELL, Esq.,
Director of Forestry,
Ottawa, Ont.

SIR,—I have the honour to submit herewith my first annual report, which is a summary of my work as Assistant in the Tree Planting Division of the Forestry Branch.

I reported to Norman M. Ross, Chief of the Tree Planting Division, on the 9th of May and proceeded to take over the work of my predecessor, Mr. Archibald Mitchell.

The last shipment of trees was forwarded from Indian Head on May 8; therefore, the work of compiling the packing and shipping lists was completed upon my arrival. From the 9th until the 26th of May was spent checking the shipping lists to obtain correct data for the number of trees, considered by species, shipped to the various express offices and the proportionate number shipped into the three provinces. On the 26th of May I went to Calgary, accompanied by one of the inspectors, Mr. Cowie, to put in order the demonstration plots at Victoria Park for the Calgary Provincial Fair. In 1910 the Board of Directors of the Fair placed at the disposal of the Tree Planting Division approximately one acre of ground directly inside the main entrance and constructed around it a substantial panel fence. In the spring of 1910 Mr. Ross drew up a planting plan for the above plot and also a plan for an ornamental border on each side of the main entrance to the industrial building. Mr. Mitchell supervised the planting of these areas in the spring of 1910 and the material used was grown at the Nursery Station, Indian Head. The plot in the enclosure contains plantations of the various species recommended by the Forestry Branch as suitable to western Alberta. There are also coniferous and deciduous seed-beds and coniferous transplant beds, to demonstrate the manner in which trees are propagated. As the demand for planting material is increasing so much more rapidly than the facilities for producing the supply, I believe the propagation by seed of the broad-leaved trees suitable for plantation in the prairie provinces should be emphasized. as far as possible, and encouragement given to farmers to raise their own stock. There are places in nearly every district where the seed of maple and ash could be secured at little expense, and, where not locally available this seed could be purchased from commercial dealers. With a few pounds of seed and several square rods in the home garden, a sufficient number of trees could be grown to extend the shelter belts already established under the direction of the Forestry Branch.

On account of the very dry season in 1910 there were numerous failures in the plantations at Victoria Park, especially amongst the conifers. After I had replaced all the dead trees and sown the seed of the coniferous and broad-leaved species, I returned to Indian Head. A few days were spent in June with several of the inspectors gathering elm seed on the Experimental Farm. On the 21st of June I met Mr. Stevenson at Sanford, Manitoba. From here I accompanied him for four days visiting the people in that district who have received trees from the Forestry Branch and those who had applied for trees. Several older plantations were visited which had made a remarkable growth and are an evidence of what may be expected of tree-planting in Manitoba. On the 27th June I returned to Calgary to take charge of the Forestry Exhibit during the Provincial Fair. Beside the demonstration plots there was a collection of enlarged photographs showing what has been accomplished in the way of tree-planting at Indian Head and in the various localities throughout the provinces of Manitoba, Saskatchewan and Alberta. There was considerable interest taken in the photographs, but more especially so in the demonstration plantations and the ornamental planting around the Industrial Building. All during the Fair a number of the shrubs and perennials were in bloom, which added a great deal to the attractiveness of the grounds. As the trees in the plantations become larger they will increase in value as examples of shelter belts and also form a very pretty group of trees in the Fair Grounds. I had an opportunity of visiting the Fair Grounds while passing through Calgary later in the summer and found but few failures in any of the plots. There was a very satisfactory stand of maple and ash seedlings, and not more than five per cent loss in the coniferous transplants. After the closing of the Fair I met one of the new inspectors, Mr. Cowie, at Lethbridge, and spent a week with him inspecting the plantations in that locality. Although this is considered a dry section of Alberta, there have been very satisfactory results obtained from tree-planting. Many of the recipients are in a position to irrigate, which is a great protection against drought.

During the latter part of July, I attended the Brandon Fair and had charge of the Forestry Exhibit in the Agriculture Building. The exhibit at Brandon was somewhat similar to the one in Calgary, excepting the collection of native woods from Manitoba.

These consisted of sections about three feet long taken from the log and having a portion of the face polished to demonstrate the different grains and textures of the various species. The demonstration plots around the building were not laid off in regular blocks as at Calgary, but consisted of irregular groups separated by driveways. A small area directly at the back of the building contained a small nursery of coniferous and hardwood seed and transplant beds. There were several thousand people who visited the exhibit and a great many of them had questions to ask regarding the growing of trees on the prairie. From interest shown, it is certain that a considerable amount of information regarding tree-culture was carried away by the visitors and no doubt it has stimulated an increased desire to establish shelter-belts around the prairie homes. On the 1st of August I met Mr. MacDonald at Moosejaw, and spent several days with him along the Soo Line. A very luxuriant growth of all varieties of trees supplied by the Forestry Branch was the most noticeable feature in this district. This growth was due to the very heavy soil, high in nitrogenous matter, and to the abundance of moisture present. I made growth measurements on several plantations and found a maximum current growth for maple to be over five feet. On account of the heavy clay soil cultivation was more difficult in this district and where it had been neglected there was a heavy growth of weeds and grass which stunted the growth of the trees and gave them an unhealthy appearance. In a very heavy soil cultivation is of paramount importance; during dry seasons the top soil bakes and cracks, increasing evaporation from the subsoil; while in very wet seasons the top soil is saturated, giving little opportunity for the proper circulation of air around the roots of the trees.

On the 7th of August I met Mr. Kennedy at North Battleford and spent several days north of the Canadian Northern Railway and several days south, in the vicinity of the Eagle Hills. In both of these localities the soil and climatic conditions seem to be very favourable to tree growth. The soil is a rich sandy loam and there was little evidence of damage from winter-killing. Both the cottonwood and the Russian poplar seem to do exceptionally well in this part of the province. The remaining part of August was spent in Northern Alberta, along the Lacombe Branch of the Canadian Pacific railway, with J. N. B. MacDonald. This being a comparatively new country, the majority of the plantations are quite young, although all varieties supplied by the department seem to be making as good a growth as those farther east. The principal feature was that a great many of the settlers are not ready for tree-planting. The buildings are only temporary, and, in the majority of cases, those who had applied for trees have not had sufficient time to properly prepare the soil. As the farms become better established there will be more time available to properly cultivate the ground and care for the young trees which are to form the shelter-belts in the future. Railway facilities are not developed as they are farther east, which makes inspection work more difficult, necessitating long drives by livery to reach the recipients.

From northern Alberta I returned to Indian Head to check over the forms received at the office, which had been sent out by the inspectors where it was inconvenient to visit the applicants personally, and to answer inquiries regarding the arrangement of plantations and the distribution of planting material.

On September 1, I met Mr. Mackintosh at Watrous, Sask., and spent several days on inspection with him in the country south of the Grand Trunk Pacific. From Watrous I went to Dauphin, Manitoba, where I met Mr. Kay and spent several days in that locality. The largest annual growth I saw during the summer existed around Dauphin. In several cases the maple had made a growth of six feet, and cottonwood over seven feet, during the season of 1910. The soil is a black loam and generally contains a sufficient amount of moisture to produce a vigorous growth. The occurrence of bluffs and natural tree growth is very noticeable through this part of Manitoba, and there is not the need of planted shelter-belts, as in the treeless areas farther west.

The first two weeks in October were spent in Alberta completing the inspection district assigned to Mr. Cowie, who returned to the Nursery Station the last of September to assist with the lifting and bunching of seedlings. I worked from Calgary north on the Edmonton branch of the Canadian Pacific Railway as far as Carstairs, visiting fifty-six applicants. The district along the foothills of the Rockies from Macleod to Olds has been found to be less favourable to tree growth than any part of the prairie provinces. All the varieties supplied by the department have been planted in this part of Alberta, and all, with the exception of the caragana, have been winter-killed. By the above I do not intend to convey the impression that such species as the willow, Russian poplar, or even the Manitoba maple cannot be grown along the foothills; but, if planted on a rich soil and a southern aspect, there is danger of a setback by early and late frosts. Several peculiar incidents relative to tree growth were seen in the vicinity of Airdrie, Alta. A plantation four miles southwest of the town, consisting of maple, Russian poplar, elm and willow, was damaged more or less by late frosts in the spring of 1911, while another plantation twelve miles east, consisting of the same species, and planted on similar soil, showed no effect of winter-killing. The first plantation lay on a southern aspect, while the latter lay on a northeastern aspect. Whether or not this degree of hardiness can be accounted for by the change of aspect alone is not certain with the amount of data at hand. After completing the inspection work in Alberta I returned to Indian Head and since then I have been occupied with the general office-work relative to the shipping, packing and inspection lists for 1912.

My work during the summer has given me the opportunity of seeing the different conditions which influence tree growth in the various districts and to make comparisons of the results obtained under these conditions. The method of inspecting is somewhat different with each inspector, and by accompanying them for a few days comparisons can be made as to the most efficient and practical system. Some of the districts are entirely too large for the amount of time available and it is essential that the inspectors cover their territory in the quickest time possible without omitting any necessary data and giving each applicant all the assistance desired in the way of suggestions and advice regarding tree-planting.

Taking the three provinces as a whole, and including all the plantations from those first established to the ones more recently set out, it is certain that the results obtained have been exceedingly satisfactory. In all except the newer districts there are thrifty plantations which are a stimulus to the community and will do a great deal towards the advancement of tree planting on the prairies.

Your obedient servant,

S. S. SADLER,
Assistant in Tree Planting Division.

No. 6.

REPORT OF A. P. STEVENSON.

DUNSTON, MANITOBA, December 21, 1912.

R. H. CAMPBELL, Esq.,
Director of Forestry,
Ottawa, Ont.

SIR,—I have the honour to submit herewith my eleventh annual report on the work done by me as inspector of tree plantations in the Tree Planting Division of the Forestry Branch.

The district assigned to me this year was that traversed by the main line of the Canadian Pacific Railway from Brandon to Winnipeg and eastward to the eastern boundary of the Province of Manitoba, embracing all of Manitoba lying between that line south to the International boundary, together with the territory served by the Oak Point branch of the Canadian Northern Railway and the Stonewall, Arborg and Winnipeg Beach branches of the Canadian Pacific Railway.

The total number of applicants on my list was 704. Of that number 471 had received trees previously, and 106 are again receiving trees. There are 233 new men, of whom 156 will receive trees in the spring of 1912, making a total of 255 men who will receive trees to the amount of 165,800.

In nearly all cases where new applicants were not granted trees in the spring of 1912 the reason was due entirely to the lack of proper preparation of the soil for trees; in a few other cases where the necessary preparation had been unsuitable on account of being made too close to the farm buildings, trees were not granted. It is a great mistake to allow trees for a shelter-belt to be planted too close to buildings. Sixty yards distance from building wherever possible should be insisted on, even if the planter should think it a hardship to put off planting for another year. Afterwards he will always be glad this was insisted on by the inspector.

The plantations set out in the spring of 1911 in the southeastern, south central and central portions of Manitoba have done remarkably well. Fully 85 per cent of maple and ash, 80 per cent of Russian willow and poplar and 45 per cent of the cottonwood are growing and in a thrifty condition.

The growth of the trees set out in 1910 in the district mentioned was above the average of other years. Some of the growths on the maple measured three and one-half feet and over, ash three feet, willow three and one-half feet, cottonwood four feet. In fact the growth was surprising when it is considered that last year an extended drought prevailed through the larger portion of the district mentioned, the young trees planted in 1910 barely holding their own.

The spring of 1911 was one of the most favourable for tree planting in Manitoba. During the entire summer abundance of rain fell, the precipitation being above the average, except in some parts of southwestern Manitoba. In some part of that district the drought this year was very severe, this being the second year of the dry period. It extended about fifty miles along the International boundary taking a strip twelve to fifteen miles wide in Manitoba. The young plantations in this dry strip were looking fairly well, notwithstanding the extremely dry weather, and, while the growth was small, it was remarkable to note the number that still had life and apparently are ready for business as soon as the necessary rains come.

The wisdom of the rule insisted on by the Forestry Branch, that the land must be properly prepared before trees are planted, has been abundantly proved throughout this district during the past two seasons.

No injury from late or early frosts was noticed in my district during the season, and as there was an average amount of snow during the past winter little or no injury from winter-killing was noticed.

In the Souris district some injury was done to the maples by the tent caterpillar, and I regret to say little or no effort was being made to overcome the pest.

Very little damage was done this year by the vagabond gall, and that only in the southwestern, or dry, district.

I am pleased to report that the general care and condition of the young plantations are fully up to the average of other years. A better knowledge of the requirements of the tree-planting scheme before trees are given is now abroad among the farmers wanting trees, and the impression is gradually gaining with intending planters that if large trees are desired they will require to plant little ones.

The Russian willow is growing in popularity with the farmers. This is not surprising when we consider how easily it is propagated, its quick-growing qualities, hardiness, freedom from disease and the fact that these trees are among the first things green in spring and remain green late into fall, when everything else is brown and bare. These points appeal strongly to the farmer on the bleak, open prairie. The ash, also, is a tree much desired by the farmers when once it gets established, but to secure the best results it should always be planted with maple, never with willow, cottonwood or Russian poplar.

Old plantations are showing up more prominently as the years pass and it is always a source of satisfaction to visit, examine their growth and note their general condition, and incidentally learn some lesson therefrom, and also to hear the appreciative remarks on their benefits by the owners. One of these, and by no means the least, is the large number of singing birds of various kinds that are now noticed around their prairie farm homes that were never seen there before they grew their young plantations.

Respectfully submitted,

A. P. STEVENSON,
Inspector of Tree Plantations.

No. 7.

REPORT OF ANGUS MACKINTOSH.

Gravesend, Dysart, Saskatchewan, December 1, 1911.

R. H. Campbell, Esq.,
Superintendent of Forestry,
Ottawa.

Sir,—I have the honour to send you herewith my report upon the tree-planting inspection work intrusted to me for the summer and autumn season of 1911.

The territory allotted to me was that lying between the Manitoba boundary on the east and Saskatoon on the west; and from the Qu'Appelle Valley on the south to the Yorkton district on the north. The Kirkella branch of the Canadian Pacific Railway, the main line of the Grand Trunk Pacific Railway, and the Yorkton division of the Canadian Pacific Railway run through that tract of country.

The names on my list numbered 722. I visited 666 of that number, and sent circulars for the requisite information to the remainder of them. As some of the circulars sent out had not been returned at the end of the season, when I handed in my books at Indian Head, I cannot give the exact number of the people on my list to whom trees will be supplied next spring, but it will be between 160 and 170. There were sixteen on my list that were not eligible for trees, as they lived in bluffy places where nature had provided shelter.

I visited Indian Head on the 1st of June and next day began work at Manson, and I finished on the 29th of October at Churchbridge near Yorkton.

As there are now plantations of from one to six years of age dotted all over this part of Saskatchewan, and the climatic conditions all over are very much alike, a few general remarks on the present condition of the trees will suffice.

Last season I had to record many failures from drought amongst the newly planted trees, mainly in the western part of my territory; this season, I am glad to say, I have a better account to give. The early part of the season, just after the young trees were planted, was showery, and it continued throughout more moist than northwestern seasons usually are. Consequently it was an excellent season for tree planting and tree growth. In my eight years inspection work I have not seen so few failures amongst the newly planted trees. In some plantations containing from 700 to 1,000 I could hardly find a dead tree, and where there were any they amounted only to two, three, or at most five per cent. There were, and I presume always will be, a few exceptions, clearly traceable to dilatoriness in removing the trees from the railway stations and careless planting. The failures, chiefly amongst the cottonwood and Russian willows, all over will not exceed four per cent.

The trees planted last year, after the blank places had been filled up, look well and have this year made good headway.

As to the older plantations I may say that many of them are now affording shelter to buildings and gardens and have covered the nakedness of many bare homes. In some of those plantations the cottonwoods are from twelve to sixteen feet in height, willows from ten to twelve, maple eight to ten, and ash from six to eight feet. It is a pity, however, that the owners of some of those plantations stop stirring the ground and keeping down the weeds too soon, and allow bad grasses to get established amongst the trees, before there is sufficient cover or shade to check them. When couch grass has spread under the trees before the branches meet, stuntedness and decline invariably follow. I estimate the failures all over, amongst the older plantations, at ten per cent. The greatest death rate is amongst the cottonwoods, and the least amongst the ash.

It is gratifying to find that some of the people that had trees from the Forestry Branch for two or three years are now growing trees from seed and cuttings themselves, and in that way extending their plantations. They should be encouraged in doing this, and I always give them advice as to the best way of thus helping themselves.

In several places that I visited the maples and cottonwoods, of one and two years' growth, had been cut back by the fall frosts, that came upon them before the shoots had ripened, and the winter storms. This, however, is a common occurrence, that retards the growth of the trees, but does not do them any lasting injury. I do not often find trees hurt in that way after the third year.

As I mentioned in my last report, about half of the conifers distributed in 1910 failed, but I am glad to say that the survivors have this year made a very satisfactory growth. The tamarack in this respect stands first, the Scots pine second and the various spruces third. I attribute the failure of last year to lack of care, and lack of knowledge on the part of the planters.

The present offer of the Forestry Branch to supply bona fide farmers with conifers at $1 per hundred has taken well, and there will doubtless be many applicants. None, however, of the farmers that I have spoken to on this subject desired as yet to form plantations of conifers, but the wish seems to be to have some evergreens on which the eye, looking from the house or its vicinity, can rest when other trees are bare and leafless. I have been often asked by intending purchasers where they should plant those trees, and my advice has been to plant them in a row—spruce and pine alternately—inside their shelter-belts; and also to dot single specimens or small clumps about their lawns, *if the lawns are sheltered and not too small.*

That American and European larch and several varieties of spruce and pine will do well on the prairies of the Northwest is no longer questionable. The flourishing plantations at the Forest Nursery Station, Indian Head, have already proved that.

Respectfully submitted,

ANGUS MACKINTOSH,
Inspector of Tree Plantations.

No. 8.

REPORT OF WALTER B. GUITON.

Department of the Interior,
Forest Nursery Station,
Indian Head, Saskatchewan, January 18, 1912.

R. H. Campbell, Esq.,
Director of Forestry,
Ottawa, Ont.

Sir,—I have the honour to submit to you my fifth annual report on tree-planting inspection work as carried on through the co-operation of the Forestry Branch, Department of the Interior.

Since sending in my last report I was employed during the winter in the general routine of office-work until the 28th of March, when I went to the Nursery Station to assist with the planting and general distribution of trees until the 15th of May, when I went to Brandon to finish planting the exhibition plot at the Forestry Building. I then returned to the Forestry Office to arrange my books to commence inspection work on June 1.

The district assigned to me was the main line of the Canadian Pacific Railway from Fleming on the eastern border of Saskatchewan, to Maple Creek on the west. Total number of square miles over which applicants were scattered was 31,320.

On June 1, I commenced my tour of inspection at Fleming. This district, as far west as Indian Head, is more or less dotted with small bluffs of the native poplar. These trees, however, do not always afford protection where the farmer intends building, and it has been found necessary to apply to the Forestry Branch for assistance. In 1901, when the tree-planting scheme was first advocated, this district among others realized the benefits of a well established belt of trees. Object lessons could already be seen from the plantations on the Experimental Farm.

In the district between Indian Head and Moosejaw, both the older and more recent plantations are examples of successful tree planting and are now a feature of the landscape. The above is an evidence that the species recommended by the Forestry Branch are quite suited to meet the soil and climatic conditions existing on the prairie.

The remainder of my district (between Swift Current and Maple Creek) is sparsely settled and only within the last three years have trees been supplied to those settlements which are remote from the railroads. Here and there along the railway, older plantations may be seen which are affording very beneficial barriers against the cold winds common to a prairie country.

The following summary gives briefly the details as to applicants for trees in my district:—

Total number of applicants on list.	1,191
Applicants receiving trees one or more years.	577
New applicants receiving no trees.	258
Both old and new applicants receiving trees in 1912.	505
Applicants receiving trees one or more years to receive trees. .	145
New applicants receiving trees.	356

Total number of trees allotted, 383,800; average per man, 760.

The reasons why more of the new applicants did not receive trees might be classed under the following headings:—

(*a*) Lack of sufficient preparation;
(*b*) Distance from railway facilities;
(*c*) Moving of buildings, and land prepared too close to buildings.

The plantations which were planted this year were a decided success in nearly every case, and few places were inspected where trees had been planted in a slovenly manner. The cuttings of the Russian poplar and willow made a splendid growth this season and many cases were seen where this year's cuttings grew three feet. The failure among these cuttings did not exceed four per cent, as the instructions were more fully carried out on the part of the applicant during the process of planting.

Plantations in 1910 were in both Saskatchewan and Alberta. The trees which were planted in Saskatchewan were one continuous example of successful planting when the instructions had been carried out with regard to the cultivation of the soil between the rows of trees during the summer, thus keeping the surface soil in a loose friable condition, with the evaporation from the soil at a minimum. Trees which were planted on well worked summer-fallow were a pronounced success, and were able to withstand the dry period which was so detrimental to all grain crops last year. The willow cuttings, which in some cases were planted shallow, met with a consequent poor result.

The trees planted in Alberta last year did well in the district which I inspected. At Lethbridge plantations are grown under two systems, namely, cultivation and irrigation, both of which have been found successful. The trees which are grown under the irrigation system are watered soon after planting and continued until the second week in July. The water is then turned off to allow the trees to ripen up before the early frost. The ground is again flooded the last thing in the fall, so that it may freeze solid and lessen evaporation during the winter. The plantations which were planted in 1909 are now eight to ten feet high according to the species used and care which they had received since planting.

This season was a most uncommon one in the history of the west. During the winter we had a very heavy fall of snow and this did not disappear until late in the spring, which seriously hampered all work, especially the spring work of the farm.

The trees were all planted, and were taken from the station in nearly all cases within a week after notice was sent out to the applicants informing them of their shipment. I did not see a case where trees were seriously damaged either from early or late frosts. There were districts which were seriously affected with drought, but, as we are only commencing to supply this district with trees, better results are looked for in the future.

The information forms which are sent to applicants remote from the railways were in most cases correct, but a visit from the inspector is more satisfactory. It is necessary in many cases to explain the actual preparation of the soil, also the best methods of planting, as ploughing a furrow or planting with a spade. These are the methods used by most of the settlers who were visited this summer, many of whom were visited for the first time on account of the distance—100 miles or more from the railways.

In closing my report for this season's work, I would say that too much effort cannot be made to counteract the tendency of some applicants in wanting to plant too close to the buildings. Plenty of room should be allowed for in case they wish to extend their buildings at some future date. The location of many of the buildings does not always allow the forming of a snow-trap in relation to the shelter-belts which are usually planted on the north and west sides of the buildings to counteract the prevailing winds. The older trees which were inspected this season were found to have made a sufficient shade to prevent such a vigorous growth of weeds which are such a menace to the younger plantations.

The conifers which were distributed last year are doing well where the instructions were followed regarding the shading of the plants until they recovered from the strain of transportation and replanting. But the chief cause of failure seems to have been in the handling of the trees before planting, by allowing the roots to be exposed to the sun and wind.

It does not seem necessary here to enlarge further upon the benefits of tree planting. Everyone living on the prairie realizes the advantage of well established shelter-belts, not the least of which is the increased value of the property—an asset to the vicinity. Therefore it should not be necessary to seek further methods to encourage a farmer in taking up a work which he knows himself to be of value.

Respectfully submitted,

WALTER B. GUITON,
Inspector of Tree Plantations.

No. 9.

REPORT OF JAMES KAY.

Department of the Interior,
Forest Nursery Station,
Indian Head, Saskatchewan, January 18, 1912.

R. H. Campbell, Esq.,
Director of Forestry,
Ottawa, Ont.

Sir,—I have the honour to submit my fourth annual report on the plantations set out under the direction of the Tree Planting Division of the Forestry Branch.

The districts covered by me were traversed by the following railway lines:—

Saskatchewan.—The Pheasant Hills branch of the Canadian Pacific Railway from Asquith to Macklin, and from Macklin to Bounty on the Kerr Robert and Macklin branch line; Grand Trunk Pacific Railway, Saskatoon to Artland; Goose Lake branch Canadian Northern Railway from Vanscoy to Fiske; Prince Albert branch Canadian Pacific Railway from Hague to Tisdale.

Manitoba.—Main line Canadian Pacific Railway from Kemnay to Kirkella, and all the lines north of this in Manitoba.

The number of men on my list in 1911 was 1,104; of this number 566 had received trees previously. The new applicants numbered 538. The total number of men receiving trees in 1912 is 591. Of these, 260 already had been supplied with trees one or more years and the remaining 311 were new men. The number of trees allotted to these men for the spring of 1912 is 407,100, an average of 688 trees per applicant. Two hundred and seven new men did not receive trees; the chief reasons for this may be stated as follows: (1) The land was not in a proper state of cultivation to plant trees therein; (2) the proposed plantation was too near buildings. A few were removing to another building site through lack of water and a few had sold out, rented their farms, or for other reasons did not desire delivery of their trees.

The plantations set out in 1911 almost without exception have done remarkably well, a very small percentage of the plants having failed to root and start into growth. About 97 per cent of the 1911 planting were alive. This favourable result was no doubt due to the large amount of moisture in the soil owing to heavy rains in the fall of 1910, combined with the large amount of snow which fell during the winter and early spring months, added to ample moisture which was precipitated during planting time. The summer was unusually cold and wet, but there was no check to growth throughout the entire growing season.

The 1910 plantations were not so fortunate in certain districts. Many of them suffered severely from drought which reduced the vitality of the plants. In some instances with the fall rain there was much late growth, thereby many were damaged with frost and a good many killed out; consequently many of the 1911 plants that were meant for extensions had to be used for filling up blanks. Willows and cottonwoods suffered most, owing in part to bad planting. Drought was the main disturbing factor, however.

The plantations previous to 1910 were few in my district in Saskatchewan. I can safely say that all are in good condition, some of them, indeed, splendid, and demontrate in a thoroughly practical manner what can be done on the prairie in beautifying the home surroundings, in addition to giving substantial shelter from the cutting winds in winter. In Manitoba, where the majority of the older plantations are, they have in most cases done well; and where ordinary care has been given, there is nothing left to be desired. Indeed, too much credit cannot be accorded some men who have persevered in the face of many setbacks. Some of them have been repeatedly hailed, but in spite of this they have fine plantations to-day.

On the Goose Lake branch of the Canadian Northern Railway, and the Canadian Pacific and Grand Trunk Pacific railways west of Saskatoon, the 1910 trees suffered severely during the early spring and summer months from drought, owing no doubt to the dry fall of 1909 and lack of rain in the early part of the summer of 1910. The plants made little growth until after a heavy rainfall in the first week of September, which started growth afresh and kept them growing late, with the result that the maple and cottonwood were all more or less damaged by frost, thereby weakening many plants which were unable to recover and died off, causing many blanks.

Cottonwood should not be sent to the district surrounding the Goose Lake branch, or at least only sparingly, and then only when asked for, as they do not do well. I believe that the soil and rainfall have much to do with its poor showing in this locality. Hitherto the rainfall has been scanty. The soil is apparently fertile enough, but heavy, compact and inert; there is little humus in it, consequently it has to be worked deep to permit the entrance of air and moisture and enable plant roots to get away from the surface. I think that these conditions affect the cottonwood adversely. In the north country damage from frost was in evidence from too late growth. In Eastern Manitoba I observed no damage from frost; the plantations were unchecked from either frost or drought.

I have obtained data regarding the rain and snow-fall in Manitoba and the Eagle Hills district of Saskatchewan for the years 1910 and 1911. Those for Manitoba were furnished by the Manitoba Department of Agriculture at Winnipeg, and those for the Eagle Hills district by J. Saunderson, Esq., of Anglia, Sask. The following are the figures:—

STATION.	Location.			March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Total.
				1910.									
	Sec.	Tp.	Rg.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.
Manitoba—													
Hillview	9	11	23 wP	2·25	1·46	1·63	1·52	2·55	0·63	2·38	0·35	0·08	12·85
Minnedosa	1	15	18 wP	0·72	1·30	0·98	2·63	1·60	1·73	1·48	0·16	....	10·60
Rapid City	20	13	19 wP	0·18	0·82	1·10	3·39	1·44	0·83	1·74	0·90	....	10·40
Swan River	21	36	27 wP	....	0·76	2·20	3·17	1·30	4·47	0·79	0·22	....	12·91
Average of above four Stations	....			....	....	....	....	....	....	....	....	....	11·69
				1911.									
Hillview	....			....	....	3·73	2·82	4·16	6·82	1·62	2·56	....	21·71
Minnedosa	....			....	0·62	2·87	3·05	2·05	3·42	2·77	1·86	....	18·64
Rapid City	....			....	0·85	3·25	2·28	4·95	4·83	1·69	3·07	....	20·92
Swan River	....			....	0·31	2·96	3·52	2·64	3·68	2·37	1·12	....	16·60
Average of above four Stations	....			....	....	....	....	....	....	....	....	....	19·46
				1910.									
Saskatchewan— Anglia—J. Saunderson, observer.	30	30	16 w3	0·20	0·55	1·88	1·02	1·37	1·58	0·36	1·40	....	8·36
				1911.									
Anglia	....			0·80	1·19	10·21	3·66	1·84	0·73	....	1·14	....	19·57

These figures may be taken as fairly representative of the districts in which my work lay. In both provinces it will be seen that there is a great difference in the amount of moisture in the two years given. It is decidedly marked, especially in Saskatchewan, where the rainfall recorded for June, 1911, was 1·85 in. more than the total recorded for the whole year of 1910. But 5·50 in. of the rain which fell in June, 1911, fell on the 30th in two hours and twenty minutes.

Naturally soil conditions varied much in the districts covered by me in western Saskatchewan. The soils ranged from a pure sand to heavy clay. Much of it is a heavy brown compact loam, difficult to work, and, unless deeply worked, difficult of penetration by plant roots. Around the country north of the Canadian Pacific Railway and Grand Trunk Pacific Railway west of Saskatoon, the country has more bluff; the soil was in consequence more free and open and, therefore, naturally adapted for tree growth. In the north of Saskatchewan and most parts of Manitoba, the soil is a heavy black loam with abundance of humus, the accumulation of herbage which had died off each year and become incorporated in the soil. Trees grow luxuriantly in such soil, and I saw some great growth in most of the plantations set out.

Planting this year (1911) has been well done. No fault could be found unless with the cuttings; some men did not plant according to plan, but these were few.

Cultivation is another matter of supreme importance, and at times it is difficult to get some men to do it thoroughly in the heavy class of soils. They object to deep ploughing on account of the horse-power it requires, and this is just the very class of soil which needs deep and thorough preparation to give plant roots a deeper and wider pasturage and to enable them to resist drought more successfully. Root-cropping bare summer-fallow as a preparation is best for this class of soil, and indeed for all soils except very light sandy ones. All vegetation has a better chance of dying out, before the trees are planted.

Sweet grass is also prevalent in low spots, and is to be found everywhere. It is especially abundant in the north country where it is favoured with more moisture. This grass and quack or twitch grass, have given more trouble in the plantations, I believe, than all other harmful influences put together, and is a sure sign when found in the plantations of improper preparation of the soil. If it is not thoroughly cleaned out before planting, it will be impossible to get rid of it after setting out the trees.

I did not see any signs of insect pests or fungoid diseases of any kind this season. Hail was the only cause of damage that I saw, save the effects of drought and frost in the 1910 plantations.

The question of pruning is always turning up, but it is not encouraged except in removing broken branches and trimming damaged trees.

There is a growing demand for tree seed. This is a good sign and will prove a valuable adjunct in the formation of plantations and woodlots of large size in the future; but little is known about tree seeds by the average farmer. To those desirous of having it, I have sketched the shape of seed of maple on slips of paper, if seed was in the neighbourhood, and told them where to procure it and at the same time giving them any other information that I thought useful along these lines. Many have tree seeds in their neighbourhood and do not know it is there, but are glad enough when told about it.

Respectfully submitted,

JAMES KAY,

Inspector of Tree Plantations.

No. 10.

REPORT OF WM. MACDONALD.

Department of the Interior,
Forest Nursery Station,
Indian Head, Saskatchewan, January 18, 1912.

R. H. Campbell, Esq.,
Director of Forestry,
Ottawa, Ont.

Sir,—I beg to submit herein my second annual report on tree planting inspection work as carried on by the Forestry Branch, Department of the Interior.

The districts assigned to me included two branches of the Canadian Pacific Railway, viz., the Soo line (Drinkwater to North Portal) and the Outlook branch (Tuxford to Outlook), and the Goose Lake branch of the Canadian Northern Railway from Fiske to Alsask.

The total number of places on my list to be visited was 1,020. Of these, 593 were old applicants who had received trees from one to three years, and the remaining 427 were new, and, therefore, were visited for the first time with a view to receiving trees in the spring of 1912.

Trees were granted to 520 applicants for the coming season. Of this number 239 received trees for the second time to continue their plantations, and a small percentage of the latter number received an allotment of a hundred or two for the third time to fill up gaps which occurred through the dry season of 1910. The remaining 281 are new applicants to whom trees were granted for planting next spring. Seven hundred and sixty trees being the average per man, 395,200 trees will, therefore, be distributed over the above districts.

Of the new applicants 146 were not granted trees, owing principally to the lack of sufficient cultivation, more especially so in the newer districts such as the country west of the Saskatchewan river from Outlook, and in the Goose Lake country. In the earlier-settled districts many are selling out and the new owners either were not aware of the distribution arrangements, or, being too busy to get the land in shape, deferred their application for a year. A common mistake is the preparation of proposed plantations too close to buildings, the idea in this respect being 'the closer to buildings, the better shelter from the prevailing winds.' No thought of snow accumulation in the enclosure is entertained until the mistake is pointed out, when the applicant immediately commences to prepare his land according to directions given for the following year's distribution.

The plantations which were set out in 1911 did exceedingly well. They were well planted and cared for, and in the districts traversed an average of 95 per cent of the trees and cuttings were found to be alive at the time of inspection. Cottonwoods seemed dry and slow of starting into growth, but from June 30, when a general rain was experienced over Western Saskatchewan, it became apparent that the larger percentage of these began to shoot from the roots.

Although the dry summer of 1910 was so unfavourable to tree growth in the case of fresh-planted stock on the prairie, yet where cultivation was persisted in, many good plantations with strong vigorous growths of three feet amongst the maple, nine inches for the ash, and from two to four feet in the case of the cottonwood and willow were to be seen. This substantiates the statement that when the work is done thoroughly there may be no fear of the results which usually follow a dry season.

Plantations set out previous to 1910 are now showing up well, and great pride is taken in them by the owners. From measurements taken of three-year-old belts, the trees average about as follows in height: Maple, 5 feet; ash, 3½ feet; cottonwood and willow, from 7 to 9 feet. These heights are not unusual, and in the older settled districts along the Soo Line, many plantations may be seen from fifteen to eighteen feet in height.

The spring of 1911 was a most favourable one for the planting of trees, owing to the amount of moisture precipitated during the fall of 1910 and the heavy snow which fell during the winter. The spring also, opening up as it did with an abundance of rain, did much to stimulate this work just when desired. A dry spell later, however, struck south Saskatchewan, and grave fears were entertained of a recurrence of the 1910 experience which was even worse owing to the appearance of late frosts. Especially was this the case in localities southwest of Weyburn. On the morning of June 26 I noticed several plantations where the young shoots of ash had been affected in consequence of frost, but no permanent damage was done. From June 30 the rainfall was more or less general and above the average of late years over Western Saskatchewan. No damage was noticed, however, from winter-killing.

Along the Soo Line the soil varies from a sandy to a heavy chocolate loam with a clay subsoil. The latter makes cultivation a difficult matter owing to the baking of the surface soil when dry and the heavy sticky nature when wet.

In the districts covered over the Outlook branch, the soil is more of a rich sandy loam with more or less of a clay subsoil. The soil being more friable, this country is well adapted to the growth of trees.

The soil in the country traversed from Fiske westward on the Canadian Northern Railway is generally a heavy clay, and in certain districts a hardpan subsoil with an open surface soil, known as 'loose top;' there being little vegetation on this, it can be easily worked up into fine shape soon after breaking, if backset deeply. This country being newly settled, there are few plantations set out from which to compare results of the various species distributed.

Owing to the heavy snowfall of 1910 and 1911, many of the old plantations were damaged to a great extent with snow-drifts. More particularly was this the case where the plantations were of a width over eight or nine rows and with no snow-trap. The damage done in this way is rather unfortunate after the time and labour expended on them. Fine gardens are now to be seen here and there with abundance of small fruits and vegetables, many now taking advantage of the snow-trap for this purpose.

No damaging effects from insect pests or disease were perceived to any extent, this being due, no doubt, to the cool, damp season of 1911.

With the extension of railways now under construction south of the Canadian Pacific Railway main line westward, and the Goose Lake Branch of the Canadian Northern Railway to Munson in Alberta, another big field is being rapidly opened, and many farmers whose places now lie remote from any existing line are already taking advantage of the co-operation of the Tree Planting Division of the Forestry Branch to shelter and beautify their new homes.

Your obedient servant,

WM. MACDONALD.
Inspector of Tree Plantations.

No. 11.

REPORT OF JAMES COWIE.

Department of the Interior,
Forest Nursery Station,
Indian Head, Saskatchewan, February 13, 1912.

R. H. Campbell, Esq.,
Director of Forestry,
Ottawa, Ont.

Sir,—I have the honour to submit to you my first report as Tree Planting Inspector in connection with the Tree Planting Division of the Forestry Branch.

The districts assigned to me for inspection were those traversed by the main line of the Canadian Pacific Railway, Crowsnest line west of Medicine Hat to Hillcrest, the Alberta Railway and Irrigation Company's lines from Lethbridge south to Stirling and Cardston and from Stirling south to the International boundary line, the Lethbridge-Carmangay branch of the Canadian Pacific Railway, the Calgary-Macleod line from Macleod to Midnapore, and the Calgary-Edmonton line from Airdrie to Didsbury.

I was under orders to return to Indian Head on September 28, to assist in the digging and heeling-in of the stock for 1912, and therefore 54 applicants on the Calgary-Edmonton line were visited in October by Mr. S. S. Sadler of the Forestry Office, Indian Head.

The total number of applicants on my list to be visited was 798. Of this number, 514 had received trees one or more years, and the remaining 284 were men to be visited for the first time in connection with the distribution of trees in the spring of 1912. The total number of men to whom trees were granted for 1912 is 395. Of this number, 223 had received trees one or more years who wish to further extend their plantations and to fill up failures owing to various causes, but principally through the dry season of 1910. The remaining 172, being applicants who have their ground prepared satisfactorily and have satisfied the requirements of the Forestry Branch, were granted trees for planting in the spring of 1912.

The number of trees allotted for these 395 applicants is 300,240, an average of 760 trees per applicant. New applicants had trees withheld, chiefly for two reasons, either because their ground had not been properly prepared, consisting of spring breaking, sod not sufficiently rotted, unbroken ground, wheat or other cereal growing on land intended for trees, or because of the proximity of the intended plantation to buildings. A thorough preparation of the soil and a minimum distance of one hundred feet from the buildings was insisted on. In some instances applicants had sold out, and an application to the Forestry Branch from the new owner was necessary before trees could be granted.

The plantations set out in 1911 are a decided success with a very small percentage of failures. I estimate 97 per cent of the trees and cuttings set out in the spring of 1911 have taken root. This is very encouraging when consideration is taken of the distance some of the applicants are from a railway station and the time elapsed in the transit of the trees. Frequent complaints were made of the carelessness of the express agents; some of the shipments of trees lay for weeks and in some cases were never received by the consignee, this no doubt being accounted for by the express charges being prepaid. In every case the applicants readily endorsed the recommendation of the Forestry Branch that express charges were to be paid by the applicant on receipt of the trees in the spring. The fact that so small a percentage of the cuttings and trees failed to take root, and the vigorous growth were due to moisture in the ground in the spring, owing to the heavy snowfalls of the previous winter and the abnormal rainfall of the summer of 1911. In many cases the cuttings of Russian poplar and willow made growths of three feet and upwards.

The plantations set out in 1910 were not so successful, with a much larger percentage of failures on the lighter soils with gravelly subsoils. The prolonged drought during the growing season of 1910 was the principal cause of failures.

It was gratifying to see that where thorough cultivation was persisted in and the air cells broken up through which any moisture in the ground was slowly evaporating, a larger percentage of trees and cuttings had taken root and in the summer of 1911 were making vigorous growth. Among the maples planted in 1910, growths of three feet were quite common, among the ash eighteen inches, and Russian poplar and willow, four feet.

From Lethbridge south on the Alberta Railway and Irrigation Co.'s lines, some of the older plantations planted previous to 1910 are to be found. These are grown under two conditions, cultivation and irrigation, and to judge by the flourishing plantations to be seen in the villages and along the road allowances, both systems have had good results. It is a common thing to see five and six-year-old plantations, twelve and fifteen feet high, enclosing gardens in which small fruits are being successfully grown. On the Macleod-Calgary line also, some of the older plantations are to be found. Around the Royal Northwest Mounted Police barracks at Macleod, an object lesson can be had. Cottonwoods and Russian poplars planted in 1907 and 1908 are from ten to twelve feet high, and the tamarack planted in 1910 are all alive notwithstanding the dry season and growing on gravelly subsoil. The beneficial effects of persistent cultivation are here thoroughly established.

West of Medicine Hat, where the soil is a light sandy loam, I saw cottonwoods and ash four and five years old, which had made vigorous growth up to 1909, killed back, root and branch, during the winter of 1910. This I attribute to the heavy rains which came early in the fall of 1910, starting growth and rushing a flow of sap. The trees were caught and killed by the first fall frost while still growing and before they had time to ripen their wood. This was the only case of killing outright I met with, and, I am glad to say, was the exception and not the rule.

From range twenty-four, west of the fourth meridian, to range two, west of the fifth, owing to the elevation and extremes of temperature, only certain varieties of trees seem to be successfully grown. Russian poplar, willow and caragana seem to grow the best. Owing to the proximity of the foothills, precipitation is greater than in the prairie country further east; hence comes a richer soil and subsoil with the accumulation of decayed vegetation. Trees such as maple and cottonwood have a tendency to grow too late in the fall on this rich soil, and the young wood, not being ripe, is cut back by the early fall frost. On September 11, I found, while visiting section 22, township 17, range 29, west of the 4th, the growths of cottonwood and maple of 1911 killed back twelve inches with an early frost on September 6. This plantation is situated in a coulée and seemed to have suffered frost-hurt worse than plantations of a higher altitude.

In view of the freezing-back of these species the proportions of trees assigned to plantations in Southern and Western Alberta for 1912 are as follows:—Maple, 11·1 per cent; ash, 7·5 per cent; Russian poplar, 15·7 per cent; willow, 31·5 per cent; and caragana 34·2 per cent. The precipitation of Southern Alberta taken at Lethbridge for the past ten years averaged 16·16 inches. The rainfall for 1910 was 7·36 inches and for 1911 was 22·03 inches, or about three times the amount of 1910 and six inches above the average for the last ten years.

I observed no damaging effects from insect pests. Cutworms partially girdled a few maples in some districts early in the season, but the damage was overcome by the vigorous growth later on. Owing to the abnormally wet season a few cases of rust were observed on some of the older cottonwood trees.

Soil conditions vary from pure sand around Medicine Hat to a heavy black loam further west, the accumulation of years of decayed ground-herbage forming a mild humus—a soil covering of the greatest importance in tree growth. From Macleod south to the International boundary line the soil is diversified from sandy loam to clay loam, well adapted for forming fibrous roots so essential to the healthy development of young trees.

In nearly every case a larger area of land was prepared than trees could be supplied for, and in some cases where a former applicant had received trees for two or three years and was written off the list, I found land prepared for further extension to plant with the root-suckers of cottonwood and Russian poplar that had sprung up in his garden patch through the mutilation of the roots of the parent trees by cultivation. Of the districts visited by me I would say that 85 per cent of trees planted under the co-operative tree planting scheme of the Forestry Branch are alive and 75 per cent growing well.

Taken as a whole, although this was my first year of inspection, I saw ample evidence of the enthusiasm with which the co-operative tree planting scheme is being carried on, an enthusiasm which leaves no room for doubt of its ultimate success. No country in the world would be more benefited by extensive planting than the prairie provinces of western Canada, as its long and cold winters would be very much ameliorated by it, while the great heat of summer would be moderated by the same cause and the agricultural interests of the country would become vastly improved, while every other branch of industry would be strengthened in proportion.

Your obedient servant,

JAMES COWIE,
Inspector of Tree Plantations.

No. 12.

REPORT OF GEO. KENNEDY.

Department of the Interior,
Forest Nursery Station,
Indian Head, Saskatchewan, January 18, 1912.

R. H. Campbell, Esq.,
Director of Forestry,
Ottawa, Ont.

Sir,—I beg to submit my first report as Inspector of Tree Plantations.

I started inspection duties on the 5th June, the districts assigned me being those traversed by the Canadian Northern main line from Kamsack to Lloydminster and from Regina to Warman on the same system, all in Saskatchewan. Mr. James Kay, Inspector of Tree Plantations, was sent with me to give an insight into the work.

I had 767 names on my list and out of that number I visited 751. The remainder were not visited owing to the distance of their location from the railway. To each of these I mailed a printed form for the purpose of obtaining the necessary data in regard to their proposed plantations.

For 1912 I have granted trees in 371 places, and out of that number 191 have already received trees one or more years. Those who have received trees on only one occasion are entitled to a further supply for another year, and there are 121 applicants who will get planting material for new ground in 1912. I granted trees to 179 new applicants, their ground and distances from buildings fulfilling the Department's requirements. There are 110 of the new applicants who will not get planting material in 1912, and the reason for this arises from various causes; such as: some of them have sold their farms, others have not sufficiently prepared their ground, others, again, have prepared their ground too near their buildings, and various other reasons also exist in consequence of which planting must be deferred. Those who remain and are still wishing trees will be visited in 1912 and will receive trees in 1913, providing their ground is in shape.

The plantations of 1911 have done splendidly and the young trees put on a good growth for the year, especially the maples. The trees could not be planted under better conditions, the weather being showery and continuing so more or less during the summer.

I should say there are 97 per cent of the 1911 trees alive; the only deaths worth mentioning are those of the cottonwoods and cuttings of Russian poplar and willow. On the whole the plantations of 1911 have done well, and, therefore, will have a good start in 1912.

Twenty-five per cent of the trees in the plantations of 1910 died owing to the small amount of precipitation during the growing season of that year. A large percentage of loss occurred among the Russian poplar and willow cuttings. The plants that were left made good progress during 1911, and are now thoroughly established. Applicants who desire to fill up failures in these 1910 plantations will receive planting material for that purpose in 1912.

Plantations set out previous to 1910 which have received proper cultivation are now fairly well established. The climatic conditions in 1911 have been very favourable to tree growth. The only district that suffered from drought was between North Battleford and Lloydminster, and consequently the trees in that district did not do so well as those in localities having a greater amount of rainfall.

I did not see any particular damage caused by late or early frosts, and insect pests and fungoid diseases were not to be seen. Around Bethune and Craik the rabbits were rather severe on the ash during the past winter.

The soil in the territory I covered is pretty much the same, being a heavy chocolate loam, but as one gets nearer the Alberta border it is lighter, being more of a sandy loam. However, it is all quite suitable for the different species sent out by the Department. Amongst some of the older plantations there are trees which have attained a height of fifteen feet, and their branches have shaded the ground sufficiently to dispense with further cultivation.

A source of great trouble to the plantations is the sweet grass, which is fairly prevalent in some districts. I do not know of any remedy for destroying this grass except to thoroughly remove the roots from the soil with a garden fork. Mulching with straw is not very successful, unless the mulch is renewed wherever the grass has not been completely smothered. I endeavoured to impress upon the new applicants the necessity of having their ground properly prepared and free of any grass roots, especially sweet and couch grass, before the trees are planted.

I had frequent inquiries for evergreen trees, and I see no reason why these should not do as well as the deciduous varieties. I saw several very good specimens of white spruce on farms during my tour, and believe if the evergreens were grown in groups, that they would do much better than if planted in rows or as single specimens.

The number of applications which were cancelled on account of neglect did not amount to more than two per cent. On the other hand I found the farmers very proud and enthusiastic over their trees, in general having fulfilled all the requirements as set forth by the Forestry Branch.

Respectfully submitted,

GEO. KENNEDY,
Inspector of Tree Plantations.

No. 13.

REPORT OF EDWARD WALMSLEY.

Department of the Interior,
Dominion Lands and Crown Timber Office,
New Westminster, B.C., November 15, 1911.

R. H. Campbell, Esq.,
Director of Forestry,
Ottawa, Ont.

Sir,—I have the honour to submit herewith the annual report of this agency for the season of 1911, in connection with the protection from fire of the timber in that part of the Railway belt east from Port Moody to the boundary line between townships 10 and 11, west of the 6th meridian.

The months of May and June were not favourable to forest fires, the rainfall being sufficient to prevent fire from running. On the North Arm of Burrard Inlet, patrolled by Ranger Bray, one fire took place, this being on the townsite of Woodhaven, and no damage was done thereby to merchantable timber.

On the 15th of July a fire started at the south end of Coquitlam Lake (east side) on lands being cleared by the Vancouver Power Company at that point. This proved to be by far the most serious fire during the season, continuing to burn for some six weeks, notwithstanding the most earnest efforts put forth to subdue same by Rangers Rowland, Marshall and Martyn, assisted by men in the employ of the company mentioned. This fire ran over an area of thirteen hundred and sixty-five (1,365) acres, nine hundred and thirteen (913) acres of vacant land and four hundred and fifty-two (452) acres of land under license. The quantity of timber affected by the fire is 14,280,000 ft., board measure—10,956,000 ft., board measure, on vacant land and 3,324,000 ft., board measure, on lands under license.

Some of the timber is a total loss, but a large percentage can be saved if logged off in one or two years. The chief difficulty found in fighting this fire was the fact that it was on a steep mountain-side, where neither soil nor water was obtainable, and, although fire-breaks were cut at various points, the fire swept over them and continued to spread.

On the Coquitlam river, patrolled by Ranger Marshall (with the exception of the fire above mentioned), only two fires took place during the season, both of which were on private lands. In one case fifty cords of shingle bolts were destroyed and in the other the damage was nil. The Pitt river and lake district, also covered by the above ranger, was by careful attention kept free from fire during the season.

With your permission I engaged a ranger this season to patrol the Lillooet river and Upper and Lower Lillooet Lakes, adjacent to which there is a large quantity of valuable timber, the greater part of which is held under license. The result of this man's work is found in the fact that, while there were a number of small fires, which consisted mostly of fires on settlers' lands and of camp-fires left unextinguished, none of these were allowed to reach the timber.

In township 1, west of the coast meridian, patrolled by Ranger Johnson, no fires occurred, nor did any fires take place in township 7, east of the coast meridian, patrolled by Ranger Gairns. In township 2. west of the coast meridian, patrolled by Rangers Jameson and Wales, ten fires, all on private lands, were attended to by these rangers, who assisted in subduing them in order to prevent their spreading to adjoining timber. In this they were successful, as no damage was done to timber under license. The only vacant Dominion Government timber in this township is the north half of the southeast quarter of section 34, which sustained no damage from fire during the season.

In townships 13 and 16 east of the coast meridian, patrolled by Rangers Bell and Chapman, several small fires on private lands were looked after and prevented from doing any damage. In that part of township 15, east of the coast meridian, lying to the west of State river, and townships 4 and 5, range 3. west of the 7th meridian, patrolled by Ranger Gilchrist, the parties operating on Timber Berth 'X' within the first township mentioned, had a permit in the latter part of the month of April to set fire for clearing purposes. The fire got beyond their control and burned some forty cords of shingle bolts, which timber was later accounted for in the mill returns, and royalty dues paid thereon. Another fire in this district started on the 17th of July, from the operations of the Western Canada Power Company, who are clearing land to be flooded by a dam on Stave river. Two hundred thousand feet, board measure, of timber was damaged by this fire, which was fought and finally subdued by the company without any expense to the Department. A small fire on Timber Berth No. 106 on the 24th of July was subdued without any damage by the use of a pump and hose from the Western Canada Company's Plant.

In townships 18 and 21, east of the coast meridian, and township 4, range 2, west of the 7th meridian, patrolled by Ranger Hughes, no fires took place on Dominion lands. Within townships 20, 22 and 23, east of the coast meridian, in the first township there is considerable vacant Government land, in the second, Timber Berth No. 223, and in the last-named township Timber Berth No. 55. No fires took place in either of the two townships first mentioned, but several fires occurred within Timber Berth No. 55. Ranger Fadden, whose duty it was to cover this district, reported a fire on the 1st of May, in a pile of debris left by the employes of the Provincial Government in the building of a road which runs partly through this berth. This fire damaged about ten thousand feet, board measure, of timber. On the 15th June a squatter on lands within the berth, by the name of Jarabek, was found with a fire burning, for which of course he had no permit, so the provincial officials have at my request refused to issue permits to squatters on lands under license. The ranger requested Mr. Jarabek to put out the fire but he (Jarabek) refused to do so. On being informed of the circumstances I instructed the ranger to have a summons issued for violation of the Bush Fire Act. This was done and the date of the trial fixed for the 23rd of June. The defendant, however, failed to appear and it was necessary to have a bench warrant issued for his arrest. The trial was concluded on the 29th idem, the magistrate dismissing the case, as the fire did no damage. I took the decision in this case up with the Hon. the Attorney-General for this province, who agreed with me that it was not in accordance with the Act, but as I was of the opinion that the defendant was not likely to again commit himself in this way, I did not follow the matter any further.

On the 19th of July and 3rd of August, a fire started on the United States side of the line, crossed the boundary and did damage to the timber on this berth to the extent of 100,000 ft., board measure. Another fire on lands within the berth occupied by a squatter occurred on the 24th of July and damaged some 30,000 ft., board measure, of timber. In all 140,000 ft., board measure, of timber was damaged by fire on this berth during the season and about 40,000 ft. of this quantity is a total loss; the balance can be saved if logged off within a reasonable time. Timber Berth No. 55 comprises an area of 15,900 acres, and there are from one hundred to one hundred and twenty-five squatters living within the berth. These require a careful watch in order to prevent them from setting fire during the dry season, and with this object in view I instructed Ranger Fadden to devote the greater part of his time to this limit, with the result that only a small quantity of timber was destroyed by fire. Ranger A. R. Hipkoe replaced former Ranger Jasper Fadden as patrol on the Chilliwack River in township 25, east of the coast meridian, and townships 1 and 2, ranges 26, 27, 28 and 29, west of the 6th meridian. The new ranger is a young man who has been brought up in that district and is, therefore, familiar with all parts of it. Only one fire occurred there during the season, this being a large fir tree containing about 7,000 ft., board measure. Another fire, caused by lightning, started on lot No. 439, which is under the control of the provincial government, and destroyed about 50,000 ft., board measure, of timber. Under your instructions a cabin was erected during the season at Chilliwack Lake for the use of the ranger. This will prove to be very useful for the safe keeping of tools and supplies to be used in case of a fire, as this district is very difficult to reach, and on this account it is necessary to provide as far as possible against any contingencies which might arise. Next season I propose to ask your permission to construct another building midway on the trail between Cultus and Chilliwack Lakes.

Ranger Dennison, who patrolled along the Fraser River in townships 23 and 26, east of the coast meridian, and townships 2 and 3, range 29, west of the 6th meridian, gave considerable of his attention to the right of way of the Canadian Northern Railway, and during the season only one forest fire of importance took place, this being at what is called Vedder Mountain, in township 23, east of the coast meridian; it was caused by the clearing of a part of the mountain where the provincial government is erecting a rock-crushing plant. The fire was attended to by men in the employ of the provincial government and no damage was done to merchantable timber.

Only one fire took place on Harrison Lake. This is reported by the ranger, R. Siddall, to have crossed from provincial lands into timber berth No. 534 at the extreme northern boundary of the Railway Belt. The fire ran over two acres or more of land within the berth mentioned, but was fortunately prevented from doing any damage to standing timber. Next season I propose to ask you to extend to the ranger in this district the same privilege as is accorded in two other cases, namely, to supply gasoline for the use of a power boat, which will make the services of the ranger much more valuable; at present he must use a canoe, and, as the water in this lake becomes very rough at times, the ranger is, consequently, frequently wind-bound, whereas if he had a seaworthy power-boat he would be in a position to weather any storm.

From Hope to North Bend, a distance of slightly over forty miles, three rangers, Messrs. Weaver, Manzer and Tweedell, were engaged during the greater part of the season in patrolling the right of way of the Canadian Northern Railway on the south side of the river. With the co-operation of the provincial rangers, contractors on the right of way were prevented from burning any debris during the months of July and August, and, although several small fires occurred within these months (the cause of which it was not always possible to ascertain), no damage whatever was done thereby to the timber along the right of way. The timber on the Coquihalla and Nicola rivers, which empty into the Fraser river at or near Hope, received careful attention and no damage was done to the timber in question by fire. Owing to the rush of mining prospectors via Silver Creek into what is called Steamboat Mountain on provincial lands, where a gold find was reported, the licensee of timber berths on this creek kept a ranger patrolling for some three months in order to keep a watch on the prospectors. This ranger reported from time to time to the Dominion government ranger at Hope and the foresight of the licensee in this respect is proved by the fact that, although many campfires were found along the trail, which had not been extinguished by the prospectors, these were attended to by the ranger and not allowed to spread as would no doubt have been the case had no person been interested therein. The rangers employed on the south side of the Fraser river, from their position, were able to keep a close watch along the line of the Canadian Pacific Railway on the north side of the river and, although some twenty-one fires occurred along this line of railway between Choate Siding and North Bend, a distance of thirty-four miles (all of which were said to have been caused by sparks from locomotives), these were, with the assistance at times of the rangers mentioned, together with Ranger Teague at Yale, subdued without any damage to standing timber. It is hoped that next season arrangements will be made to take advantage of the amendment to section 30, paragraph F, of the Railway Act, by calling upon the Canadian Pacific Railway Company, through the Board of Railway Commissioners, to establish a patrol on that part of their railway from Agassiz to North Bend, which, being upgrade, necessitates the forcing of the locomotives and the consequent emission of fire, notwithstanding the fact that such locomotives are equipped in accordance with the regulations as laid down by the Board of Railway Commissioners. In this connection I may say that under the authority of the board, a rigid inspection was made, throughout the season, of all locomotives running on the western part of this line, and in nearly all cases they were found to comply with the requirements of the regulations. The quantity of timber damaged or destroyed by fire on Dominion lands within this agency, during the season is 14,627,000 ft. and 40 cords of shingle bolts. About 5,000,000 ft. of this quantity is a total loss; the remainder can be saved if logged over within one or two years. Each succeeding year adds more difficulties to the work of fire-ranging in the advent of new railways and settlers, and it will be necessary to extend the service from year to year in order to meet these contingencies. I sincerely appreciate the prompt manner in which you have met any suggestions made to you during the season for the improvement of the service, and I am pleased to report that the rangers have been found willing to carry out their duties to the best of their abilities.

Respectfully submitted,

EDWARD WALMSLEY,
Acting Crown Timber Agent.

No. 14.

REPORT OF R. J. STEWART.

Department of the Interior,
Revelstoke, B.C., January 1, 1912.

R. H. Campbell, Esq.,
Director of Forestry,
Ottawa, Ont.

Sir,—I have the honour to submit herewith my report for the season of 1911, covering the protection from fire of the forest in that part of the Railway Belt known as the Kamloops District, over which I had supervision.

In Mr. F. Abey's district south of Illecillewaet there were during August two small fires caused by lightning, in which no timber of value was destroyed. The cost of fighting these fires was $102.50. Mr. F. Ashdown, who patrolled the new Golden-

Crowsnest line south of Golden, had one small fire during April and two during June. The cost of fighting these fires, in which no timber was destroyed, was $31.50. In Mr. J. Bell's district in the vicinty of Grandprairie and Spallumcheen Lake during May a small fire was caused by settlers clearing land, but no damage was done. On July 27 he fought a fire (cause unknown) at Pillar Lake, in which 10,000 ft., board measure, of timber was destroyed. The cost of fighting these fires was $69.50.

Mr. C. D. Collett, who patrolled the railway line along the Nicola river, put out a fire on July 14 at Agate Creek which covered 200 acres but burned only a small quantity of young growth. The cost of extinguishing this fire was $146.

Mr. W. J. Dickey, who patrolled the Revelstoke and Arrowhead branch south of Revelstoke, fought, in all, 24 fires during the summer, none of serious proportions. On July 22 one caused by lightning near Timber Berth No. 289 burned 3,000 ft., board measure, of timber, and on June 1 six small fires caused by railway engines burned 3,000 ft., board measure. He expended during the summer $315.70 in fighting fire.

Mr. F. E. Forrest, who patrolled the railway line in the vicinity of Albert Canyon, put out four small fires, none of which did any damage, at a total cost of $104. In the district of Mr. R. Johnstone, who patrolled the Okanagan branch of the Canadian Pacific Railway there were two rather large fires. On June 22 a fire, starting from unknown causes, in section 35, township 19, range 9, west of the 6th meridian, covered 400 acres, and burned 100,000 ft., board measure, of timber. The cost of fighting this fire was $130. On June 18 a fire, caused by lightning, at Trinity Creek covered 1,000 acres and burned 150,000 ft., board measure. The cost of fighting this fire was $835.

Mr. J. Lidstone, who patrolled the railway line in the vicinity of Taft, had three fires in his district. Two were of no size, but one on June 1, at Craigellachie (cause unknown) burned 20,000 ft. of timber. The total cost of fighting the three fires was $20.

Mr. R. Cossaboom, who patrolled Salmon Arm and Shuswap Lake, put out one fire in Annisty Arm on August 1, which, starting from unknown causes, covered 800 acres and burned 200,000 ft., board measure, of timber. The cost of fighting this fire was $417. On August 19 he extinguished a fire caused by lightning at Seymour Arm, which covered eighty acres and burned 25,000 ft., board measure. The cost of fighting this fire was $435.

In the district of Mr. G. Lund, who patrolled the railway line west of Revelstoke, on July 17 a fire (cause unknown) twelve miles west of Revelstoke, covered two square miles, burned 100,000 ft., board measure, of timber and 500 cords of wood, and cost $620 to extinguish. He had two other fires caused by lightning, which did no damage but cost $260 to fight.

In the district of Mr. J. Mizon, who patrolled the railway line in the vicinity of Malakwa, there were in all five fires. On June 2 a fire caused by a railway engine covered 20 acres, burned 5,000 ft. of timber and cost $69 to put out. On June 13 a fire seven miles northeast of Craigellachie, caused by lightning, burned 15,000 ft. of timber and cost $121 to put out. On August 4 a fire caused by lightning covered fifty acres, burned 12,000 ft. of timber and cost $227.72 to put out. The other two fires, which did no damage, were extinguished at a cost of $380.

In Mr. H. A. Morris' district in the vicinity of Revelstoke there were two fires. On June 19 a fire near the Dominion Sawmills limits, caused by a logging engine, covered an area 5 miles long and about half a mile wide, burned 200,000 ft. logs and killed 250,000 ft., board measure, of young timber. This fire cost $353 to put out. On August 2 a fire in the same vicinity caused by lightning covered 2 acres, burned 4,000 ft. of timber and cost $76 to extinguish.

Mr. A. McGillivray, who patrolled the railway line in the vicinity of Semlin and Spence's Bridge, put out five small fires at a total cost of $135.

Mr. J. D. McGuire, who patrolled the country south of Salmon Arm, put out two small fires at a total cost of $84.25.

Mr. D. Orr, who patrolled the Revelstoke and Arrowhead branch south of Wigwam, had a series of fires caused by railway engines, during June and July, burning over an area of about two square miles which had been practically all logged over, but 500,000 ft. of cut logs were destroyed. These fires were fought at a total cost of $1,755. On August 2 he extinguished a fire near Timber Berth No. 112, caused by lightning, covering fifty acres and killing 100,000 ft., board measure, of young trees. The cost of fighting this fire was $423.50.

In the district of Mr. W. R. Peacock, who patrolled the railway line in the vicinity of Notch Hill and Shuswap, there were two fires which destroyed no timber and were extinguished at a cost of $800.

In the district of J. C. Sheirlock, who patrolled the railway line in the vicinity of Golden and Donald, there were in all four fires. On July 18 a fire six miles north of Donald, caused by lightning, covering an area of two acres, burned 15,000 feet of timber and was put out at a cost of $18. On July 27, a small fire caused by lightning burned over one acre with no damage to timber, and was extinguished at a cost of $15. On August 22, a fire caused by lightning near Timber Berth No. 85, covering an area of 500 acres, burned up some small growth and was extinguished at a cost of $54. On September 3, a fire, caused by lightning, 23 miles north of Donald, covering an area of 35 acres, burned 20,000 feet of timber and cost $108 to put out.

In the district of Charles Todd, who patrolled the country in the vicinity of Adams Lake, a fire at Louis Creek on August 2 burned over fifteen acres with no damage to timber and was extinguished at a cost of $24. Mr. Todd put out several small fires resulting from camp-fires, which did not damage any timber, without incurring any expense.

Summing up, there were destroyed in these fires 1,555,000 feet, board measure, of timber and 500 cords of cordwood. The cost to the government of extinguishing these fires, in addition to the ranger labour, was $8,336.40.

Respectfully submitted,

R. J. STEWART,
Chief Fire Ranger.

No. 15.

REPORT OF LETELLIER O'CONNOR.

Department of the Interior,
Dominion Lands and Crown Timber Office,
Medicine Hat, Alberta, December 14, 1911.

R. H. Campbell, Esq.,
Director of Forestry,
Ottawa, Ont.

Sir,—With reference to your communication of the 10th ultimo I beg to furnish the following report regarding my work of organizing more thoroughly the fire ranging service on Lesser Slave lake, Lesser Slave river, the Peace river and the Grande Prairie.

As instructed by you in your communication of the 7th April last, I proceeded to Edmonton, where I interviewed Mr. J. E. McLaggan, who has general charge of the fire-ranging in the Edmonton district and northwards, and reached an understanding so that there would be no overlapping of ranger districts and that the districts of rangers working from the south under Mr. McLaggan would properly connect with those appointed by me, who would be working from the north.

I left Edmonton on May 5, and went by stage to Athabaska Landing, thence by steamer to Mirror Landing. From Mirror Landing I proceeded by pack train to Grouard, stopping at Sawridge on the way, where I interviewed Fire Ranger Lyllick and went into the matter of his district with him. At Grouard I interviewed Fire Ranger Cunningham and allotted him a district. At this latter place after careful consideration I appointed J. W. Allonby as fire ranger, and allotted him a district.

At Grouard I took a team and crossed the portage to Peace River Crossing, where I interviewed Fire Ranger Knot, and appointed Fire Ranger L. Bourassa, allotting each a district. From this place I proceeded by steamer to Fort Vermilion, where I appointed John Bourassa as fire ranger. I also interviewed Fire Ranger Southerland. I allotted both of them districts.

From Vermilion I proceeded to Red river, went up the river a short distance and then returned to Peace River Crossing; thence by team to Dunvegan, where I interviewed Fire Ranger Ferguson, and appointed Fire Ranger Martineau, giving each a district.

The list of fire rangers, their addresses and districts assigned to each will be found further on.

After visiting the Grande Prairie I returned to Edmonton, following the trail along which I had gone in. When on this journey I went into the matter of fire protection with all whose experience I considered would be of benefit to the Department and as a result I beg to submit the following observations and recommendations.

It would appear that many fires result from fires that have been smouldering in moss or muskegs throughout the winter, some caused by hunters and travellers leaving their fires in the fall after the fire rangers are called in, that is to say from October 30 until the snow-fall. These fires apparently smoulder all winter. Others are caused by fires which are left burning by campers in the winter, and which, after the snow is melted, work their way into the moss or muskeg and smoulder there till after the snow disappears, and after a short spell of dry weather break out into serious fires.

In this connection I beg to recommend that the fire rangers be put on their districts between 1st and the 15th of March and continue their work till the first real snow in the fall, or till November 1, and thus stop these fires in the incipient stage.

With regard to the right of our fire rangers to call out people to fight fires, the provincial authorities claim that our men have not this right, and while not wishing to enter into the merits of this question, I beg to suggest that steps be taken to have their powers clearly defined before someone makes a test case of the same. This I am expecting, as most of the new settlers are not very willing to go out to fight fires, and should it be decided that our fire rangers have no authority to call out people, their usefulness would be greatly curtailed. I also beg to recommend that fire rangers be given the power of constables.

Another thing which I consider would greatly benefit the fire-ranging service in these districts would be the construction of boats suitable for the navigation of Lesser Slave Lake and River and of Peace River. The former boat might be stationed at Sawridge, where it could be reached by wire from Mirror Landing at the mouth of the Lesser Slave River, and from Grouard at the west end of Lesser Slave Lake, when not patrolling the lake and river. The other might have its head-quarters at Peace River Crossing, the central point on the Peace River patrols, and could be reached as far west as Dunvegan by wire when the line is completed at that point, which it is expected will be next spring.

I also consider it would be advisable to have a chief fire-ranger appointed, whose duties would consist of laying out the different districts of the fire rangers in these districts, travelling all over the different patrols and thus keeping an eye on the way in which the different fire-rangers are doing their work, certifying their diaries and accounts and making any alterations he would consider necessary for the better protection of the timber in question as would be required from time to time.

The country adjacent to the Lesser Slave Lake and River is covered with fair-sized spruce and jackpine, with a mixture of poplar.

From Grouard to Peace River Crossing the country is mostly covered with tall poplar timber of merchantable quality. There are also a certain number of clumps of good jackpine asd spruce.

The Peace river is lined on both sides with small poplar, spruce and jackpine, but some distance back from the river there are good large patches of good merchantable timber—jackpine, spruce and poplar.

From Dunvegan to Grande Prairie the timber is mostly a mixture of spruce, jackpine and poplar, some of which is of good merchantable quality.

On the Grande Prairie and the Spirit River Prairie the country is covered with poplar bluffs, with no merchantable timber except on the outer edge between the prairie and the Smoky and Wapiti rivers where some very fine jackpine and spruce are to be found.

The following is a list of the fire rangers, their addresses and districts covered by each:—

Thomas Lyllick, Sawridge, patrols from the mouth of Lesser Slave river to its source at the east end of the Lesser Slave lake; from the east end of the Lesser Slave lake on the north shore to the Narrows and on the south shore of Lesser Slave lake to Swan river.

Sam. Cunningham, Grouard, patrols on the north side of Lesser Slave lake from The Narrows to Grouard and on the south side of Lesser Slave lake from Swan river to Grouard, and from Grouard to Sturgeon lake.

J. W. Allonby, Grouard, patrols from Grouard to Little Smoky river via Winagami Lake and from Grouard to Little Prairie and from Grouard to Whitefish lake.

Fire Ranger Knott, Peace River Crossing, patrols from Little Prairie to Peace River Crossing and from Peace River Crossing to Cadotte river, and from Peace River Crossing to Dunvegan.

Fire Ranger L. Bourassa, Fort Vermilion, patrols from Cadotte river to Fort Vermilion and from Fort Vermilion towards the Hay river and from the mouth of Keg river towards Keg River Prairie.

Fire Ranger J. Bourassa, Fort Vermilion, patrols Peace river below Fort Vermilion and along the Loon and Wabiskaw rivers to Arout lake and the Caribou Mountain trail.

Fire Ranger Southerland, Wabiskaw, patrols from Wabiskaw southeast towards Pelican Mountains and the Athabaska river and from Wabiskaw to Whitefish lake.

Fire Ranger D. McDonald, Dunvegan, patrols Peace River above Dunvegan and from Dunvegan in a northwesterly direction towards the Clear Hills.

Fire Ranger Ferguson, Spirit river, patrols from Spirit River settlement towards St. John via Pouce Coupé Prairie and from Spirit river to Smoky river south of Egg lake and from Spirit river to Grande Prairie settlement.

Fire Ranger Martineau, Spirit River, patrols from Grande Prairie on the Edson Trail to Waskigan (House River) where he meets the fire ranger working from the south—to the Smoky river, Sturgeon lake and along the south side of Grande Prairie Settlement.

In arranging these patrols I have taken into consideration the amount of travel on each as near as could be ascertained, also the quality and quantity of lumber to be protected, and arranged so that the forest rangers are not overlapping into each other's territory and at the same time have all the patrols join. A glance at the map will show this plainly.

I beg to inform you that I made an advance of $50 to each of the above fire rangers and have forwarded their receipts for same with my monthly statement of expenditure. In addition to this I also furnished each with an axe and a spade, but did not find a collapsible bucket to meet the requirements. The latter should be furnished them. I also distributed fire notices and the rangers are posting some of these articles.

Should the boats I mentioned be put on, an extra supply should be kept on board for use when a gang of men are taken to fight fires, otherwise two or three extra articles of each kind might be kept at the fire ranger's residence for each district.

I am glad to state that no fires of any great importance got away from the fire rangers during my soujourn in these districts, and from personal observation and information received from disinterested and trustworthy parties the fire ranging has been conscientiously performed by the fire rangers.

Respectfully submitted,

LETELLIER O'CONNOR,
Inspector.

No. 16.

REPORT OF H. A. CONROY.

Department of Indian Affairs, Canada,
Ottawa, March 18, 1912.

R. H. Campbell, Esq.,
Director of Forestry,
Ottawa, Ont.

Sir,—I beg to present my annual report on the fire ranging work in the Athabaska and Peace River districts.

It is a matter of no small difficulty to select suitable men to act as fire-rangers, as the requirements are many, and there is a comparatively small population from which to make a selection. A fire-ranger in these northern districts must be able to speak the native languages, and must be an expert in a canoe and among horses. He must know a very large tract of country like a book, for on many occasions he is called upon to make long trips inland from the rivers, where there are no trails to follow or blazes to guide him.

Some years of experience in supervising this work have led me to believe that in districts such as these, where travel is very difficult, the department would be wise in having the fire guardians work in pairs. One man, who knows the country well, with a helper or assistant under him, could cover far more territory in much less time than two men working separately. This system would allow of more frequent patrols, and consequently lessen the danger of fires in the district the men protect. A man alone in a canoe often finds it very difficult—sometimes impossible—to track against the swift current of the rivers. Two men can always travel up and down the rivers, no matter in what stage of water. The same principle applies when working inland. Two men with pack and saddle horses can divide up the work and cover more ground in shorter time than can each man working separately.

If this plan were adopted, I would suggest that the man in charge be paid $5 per day, and his assistant $3 per day. I am confident that the small increase in expenditure would be more than justified by the better service obtained.

Wherever possible, small steamers, similar to the one at Athabaska Landing, would be a great improvement over the present system of canoe and horse work. A small steamer placed below Grand Rapids on the Athabaska river could run from the rapids to Smith on the Great Slave river (some 300 miles), from the mouth of the Peace to the chutes (about 300 miles) and for some distance from McMurray up the Clearwater river. The timber along all these rivers is especially good; spruce and black-bark poplar grow to surprising sizes, and will in the future be a most valuable asset to the country.

I would also recommend a small steamer between Smith and Resolution, and one on Lesser Slave lake, both of which would prove beneficial in guarding the excellent growth of timber throughout these districts. In my opinion, a small steamer, wherever it can be used to advantage, is by far the best way of handling fire-guardian work, and, though the initial cost is considerable, the increased and better results obtained make it a saving in the end.

The fire guardians in my district are as follows:—

William Biggs. From McMurray up to Clearwater, and west from McMurray inland to the headwaters of Horse creek, a distance of some seventy miles.

John McDonald. McMurray to Grand Rapids, and, when occasion demands, from Grand Rapids to Athabaska Landing.

Tom McLelland. From McMurray down the Athabaska to Big Point.

Peter Loutit. From Big Point to Chipewyan, and the country surrounding the post.

J. Fraser. From the mouth of the Peace to Smith Landing.

A. Sutherland. West of the Athabaska river, principally in the Wabiskaw district.

Respectfully submitted,

H. A. CONROY,
Inspector, Treaty No. 8.

No. 17.

REPORT OF GEORGE DOUGLAS.

Battleford, Saskatchewan, September 30, 1911.

R. H. Campbell, Esq.,
Director of Forestry,
Ottawa.

Sir,—I beg to present my annual report on forest fires in Battleford district.

The origin of the big fire in the spring was a camp-fire left by two Indians at Pelican Lake. These I directed to be prosecuted, but, owing to the unsatisfactory way in which the evidence was given, the accused were not convicted, but the fact that an Indian could be prosecuted has had a wholesome effect on all the district. I have now sent Dominion Fire Ranger Beatty to Isle à La Crosse to prosecute Revillons and Hudson Bay men for leaving a camp-fire burning which got into the moss but was extinguished by Beatty before any damage was done. Apart from a few small areas burnt by camp-fires I have nothing to report as having been damaged by fire.

I have had no timber damaged in my district this year of any commercial value except two small berths, Nos. 14 and 16, at the south end of Green Lake belonging to the Big River Lumber Company. This is the fire that came up from Pelican Lake.

I am inaugurating in my district a system of protection in conjunction with the provincial government.

I took the matter of prairie fires up with the Deputy Minister, Mr. A. F. Mantle, at Regina and induced him to get a badge made and appoint some man in each township as voluntary Fire and Game Warden, making each man responsible for his own township. I am getting a chain of such wardens right across the country south of the timber belt and so am trying to prevent any fires getting in from the south. Most of the fires, including the late disastrous fire, came from the south and I attribute our freedom from fires this year to good work these wardens in conjunction with my fire-rangers have done this season. It is my intention to recommend for appointment to the provincial government about one hundred more such wardens and have each chain of men from east to west about twelve miles apart, so as to effectually prevent any fires coming in from the south. The men are proud of their badge (blue and gold with coat of arms of the province) and their official appointment. As to fires in the timber, only continually patrolling and cautioning hunters and prospectors will prevent them. Two of my fire-rangers, W. Venne and Pierre Morin, have been very unsatisfactory this year, and I recommend that their services be dispensed with at the end of this season. Fire-rangers Beatty and Murray are ideal fire-rangers and are satisfactory beyond expectation.

I have covered the ground from Green Lake to Portage la Loche, Cold Lake, Turtle Lake, and up to date everything is safe. The right of way on the Canadian Northern Railway is in a very satisfactory condition; the locomotives I have inspected this year have also been in good order. Only on one occasion have I had to call the attention of the boiler-maker to a bolt-hole in the smoke-box. As I came to Prince Albert on the 29th I found locomotive 88 from Saskatoon to Prince Albert with the dampers of the ash pan open. I called the engineer's attention to the same and he closed it. I cautioned him.

I would recommend that we be allowed to have galvanized-iron ration-boxes fitted in the canoes with locks on. My fire-rangers have had their rations eaten by dogs when one hundred miles away from any post, and fortunately shot a bear which they had to eat or they would have been in a bad way. The Indians do not feed their dogs in summer, but turn them loose, and when the dogs see a camp-fire they know there is a chance of obtaining food, and loss of food in a north country is serious. One of the rangers had to shoot five dogs to protect his rations on his last journey.

Respectfully submitted,

GEORGE DOUGLAS,
Chief Fire Ranger.

No. 18.

REPORT OF A. L. ROBERTSON.

DEPARTMENT OF THE INTERIOR,
FORESTRY BRANCH,
PRINCE ALBERT, SASKATCHEWAN, March 14, 1912.

R. H. CAMPBELL, Esq.,
Director of Forestry,
Ottawa, Ont.

SIR,—I beg to submit my annual report in connection with forest fire protection service for the season of 1911.

During the early spring season, from the time the snow disappeared (about the end of March) until May 8, the absence of rain, continuous warm weather and no growth of vegetation all tended to make the condition of all inflammable matter very dangerous in the open areas, and doubly so in the timbered belts, where abundance of dry vegetation of every description was to be found.

Between the 4th and 6th of May fires were started by ranchers in the Thick Wood Hills, a belt of hilly country stretching in a southeasterly direction from Fort McMurray in range 10, township 88, west of the 4th meridian, to the Pas Mountain, in township 48, range 2, west of the 2nd meridian. The soil in the above range is mainly a deep black marly clay, producing a dense growth of vegetation each season. When the ranchers were preparing new hay-bearing areas, which they intended to cut over the following season, the speediest and cheapest way was to set fire to the growth when the wind was high and the vegetation perefctly dry, thus burning away the old grass. I am informed by settlers who have taken lands in the vicinity of the ranching areas that no provision is ever made to confine the burning-over of new hay lands to areas that would provide enough hay for ranchers. If the wind is sufficiently high and the vegetation dry, the fires generally run through miles of green timber, killing this timber.

On the 4th of May, 1911, fires were started in the areas described above. The wind was blowing at a moderate rate, but increased hourly until it reached a perfect gale, which carried burning tufts of grass and cinders half a mile in advance of the line of fire. This fire swept across from range 16, west of the 3rd meridian, to range 27, west of the 2nd meridian, in an easterly direction. I am of the opinion that settlers in the vicinity of the fire greatly increased the volume of the fire by back-firing, especially those living on lands timbered with poplar scrub from two to six inches in diameter. The ground was also covered with dry leaf-mould and debris from a former forest fire that passed over the area in 1885, thus widening the front of the line of fire considerably. The fire travelled over this area at a terrific rate until it reached the coniferous timber, where wet moss and damp debris scattered through the forested area usually provide a protection to this class of timber. Owing, however, to the continued period of dry weather, the debris was very dry and contributed much in destroying the trees by reaching the roots. About half of the damage done to the timber was from fire reaching the roots. In workings where logging operations had been carried on the whole of the young timber within the boundaries of the cuttings was completely destroyed. The extent of the damage done to the timber of milling quality was approximately 110,000,000 ft., board measure. Nearly the whole of the above quantity was on areas allotted as timber berths. Of the above timber, 72,000,000 ft., board measure, was manufactured into saw-logs during the past logging seasons of 1911 and 1912. The berths mainly affected by the fire were Timber Berths 1048, 1049. 66A, a portion of 686 and 474.

During the first part of the season eight fire-rangers were employed in the forest fire protection service in the district under my supervision. This number was increased to fourteen in the latter half of the season, thus reducing the size of the areas to be patrolled.

Many small fires occurred in the settlements south of the heavily timbered belt, but these were soon got under control by the fire-rangers. During the past season an effort was made to have the settlers residing in the wooded areas co-operate with the fire-ranger in the forest protection, and during the last two months of the season no fires got away. An effort will be made, next season, to have the settlers' further co-operation, and, when they are clearing the land, to have the fire-ranger of the locality supervise the burning of the brush and keep fire under control.

Respectfully submitted,

A. L. ROBERTSON,
Chief Fire Ranger.

No. 19.

REPORT OF ANDREW FREEMAN.

Department of the Interior,
Dominion Lands and Crown Timber Office,
Winnipeg, Manitoba, March 22, 1912.

R. H. Campbell, Esq.,
Director of Forestry,
Ottawa, Ont.

Sir,—I have the honour to submit the following report respecting forest fires in the Winnipeg district during the season of 1911.

In accordance with your instructions, the fire-ranging service in the district northwest of Dauphin was last year placed under control of Forest Rangers W. A. Davis and A. McLeod, while I was instructed to take charge of the work in the territory north and east of Winnipeg. The only serious fire last year in the Winnipeg Crown Timber district occurred in the territory over which Messrs. Davis and McLeod had jurisdiction as fire-rangers, and it is therefore possible that you have already been furnished with a report by either of them. However, as one of our timber inspectors has furnished me with information relating thereto I beg to report as follows: The fire in question started on May 6 in township 40, range 26, west of the 1st meridian, close to the Canadian Northern railway, between Birch river and Novra. No rain had fallen in that part of the country for a considerable time prior to that date, and the fire therefore spread rapidly and passed through portions of townships 41 and 42, in range 26, also part of township 42, in range 25, west of the 1st meridian. On May 8 heavy rain arrested its course, and by the following day the fires were completely extinguished. It is estimated that the fire damaged from 45 to 50 million feet, board measure, of standing timber, a large portion of which is covered by timber berths Nos. 992 and 1,101. The holders of these berths are operating this winter, and a portion of the timber damaged will thus be saved. As to the cause of the fire the inspector reports: 'It may have been started by passing trains, or from the camp-fires of trappers. I have found no way of proving its origin.' The timber inspector further reports that he had travelled to the north end of Lake Winnipegosis, and there had been no fires in that district during the season of 1911.

In the territory north of Winnipeg, between Lake Winnipeg and Lake Manitoba, and also in the district east of the Red river, no serious fire occurred last year. This territory, as in 1910, was divided into five districts, and a fire-ranger placed in charge of each, who was kept on duty until the close of the season. I am satisfied that the absence of forest fires in this territory last year was largely due to the energetic work of the rangers. Fire notices in different languages were posted throughout the several districts, and the rangers made special effort to instruct the settlers how to prevent and handle fires.

Several small fires started during the spring along the southeastern branch of the Canadian Northern Railway, but none of these did any serious damage, with the exception of one in township 5, range 10, east of the 1st meridian, where a considerable quantity of cordwood was destroyed. This wood was covered by insurance, and the owner paid the dues on it in full.

The fire-rangers whom I have employed seem to be unanimous in the opinion that the greatest danger from fire in this district is from the railways, and I would respectfully suggest that, in the northwest part of the province particularly, greater efforts should be made than hitherto by placing a staff of rangers along the railway through the timber area. During the season of 1911 the rights of way of the several railways within this district were kept in better condition than during the preceding year. There is, however, still room for improvement, and it would be well to impress on the railway companies the necessity of keeping the right of way clear of dry timber and other inflammable material.

Respectfully submitted,

ANDREW FREEMAN,
Crown Timber Agent.

No. 20.

EXTRACT FROM LETTER FROM JAMES T. BLACKFORD.

Norway House, N.W.T., February 26, 1912.

R. H. Campbell, Esq.,
Director of Forestry,
Ottawa, Ont.

Sir,—I have just returned from the longest of my winter trips and herewith I beg to submit my report of same.

I made several short trips, but these were taken more to ascertain the truth of statements made by some of the Indians in regard to the size and quantity of timber in the vicinity of Norway House. I found them very unreliable. The weather was very cold, ranging from 35 to 50 degrees below zero. On January 28 I left Norway House, taking with me Sandy Scribe (my regular man) who drove the dogs, and John Keeper as extra help, both Indians.

My objective point was Trout Lake, lying northeast from here and northwest from Oxford Lake, my proposed route then extending from Trout Lake southwest to Walker's Lake and Cross Lake and then south again to Norway House. I was unable to reach Trout Lake owing to a combination of circumstances which I will relate in this report.

We had some very cold days, but, taken as a whole, the weather was favourable. The first two days out we passed through spruce and poplar in various stages of growth. Fires have constantly swept over this part, and to-day small poplar and birch predominate, with some dead spruce in places. There was no merchantable timber to be seen of any description.

Crossing over the Echimanish River we passed through a muskeg country for some miles. There were some tamaracks growing in places, but often the alders grew thick and we had some difficulty getting through.

North from this muskeg a fire of some fifteen or more years ago swept over most of the country through which we passed. Not much of the killed timber is left standing, but what there is averages about seven inches in diameter at the trunk.

There are places that seem to have escaped the more recent fire and the living trees would average some eight inches in diameter. These trees seem to be about forty years old. What interested me particularly was the fact that often among these living trees were to be found some dead giant trees,—speaking comparatively as we find the timber here to-day—of the long ago. Occasionally, one such could be seen standing without bark or limb, but many can be seen in an advanced state of decomposition, stretching for one hundred and thirty feet in the undergrowth and measuring thirty-six inches in diameter at base. All over the burnt area young spruce, tamarack and pine are growing, ranging in height from a few feet to twenty and thirty feet high.

For six or seven days we passed through thousands of acres of this young growth and the thought that forced itself upon me day after day was this, that even here where the agriculturist cannot hope to do much, nature is aspiring to do great things for Canada, if only the careless miscreant can be taught to be careful and help in the prevention of forest fires.

On some occasions,—as last winter,—I have gone for days through burnt timber without seeing any living tree and I have been pessimistic as to the future of timber in this north country.

From observations this winter, I feel that though much has been lost through devastating fires in the years that have passed, there is also much left for us to care for in the young timber that is growing up and some tracts that to-day are fair timber.

At Swan Lake I camped for several days, going out each day in different directions. One day I spent looking over the timber on the islands in Gull Lake. This was all uniformly large, from eight to twenty inches in diameter, and from 75 to 120 ft. high. The day was unfavourable for taking pictures, so next day I tried again, but when I got to Gull Lake,—which, by the way, is a large lake—there seemed to be a regular blizzard blowing. I could not see very far out on the lake so did not venture out. In the bush one could hardly notice the wind. There is some merchantable timber in fairly large quantities in the vicinity of Gull Lake.

From Gull Lake to Carrot River and north as far as we went we passed through mostly young spruce and pine of six or eight years growth. Sometimes we came to small areas of large timber and these I tried to photograph but the results were not the best, though I trust they may be of some service.

When we were north of Carrot River and west of Oxford Lake the dogs showed signs of playing out, and as John Keeper was beginning to show a little of the Indian's ugly disposition, owing to his having to break the trail for so long, I decided to turn southwest and then to Norway House.

As we came near to Carrot River again we came into some very fair timber and this extended, more or less, for forty miles or until we reached Walker's lake.

At this latter lake we saw the first hunters' camp since leaving Norway House some seventeen days previous. There were about nine families living in three small houses and one winter teepee in this camp. The houses had no windows of any description. The only light that was admitted came through a small hole in the roof near where the clay chimney found exit. Dark, dirty, overheated and overcrowded, these houses were the hotbeds of consumption that kills so large a percentage of these people.

I talked to these people of forest fires, but they were rather reticent of the past, saying there was enough dry wood to do them many years to come and promising to be very careful this coming summer. Around Walker's lake and the eastern portion of Cross lake there is quite a lot of very fine timber, tall and of good dimensions and keeping its size a long way up the tree. There has been comparatively little of this timber burnt in recent years.

One evening while the men were making camp, I started off alone to break the road for the next morning. I had gone about two miles when I came to a small river. I decided to break the trail across this and then return to camp. I had just got into the middle of the stream, when, without warning, the ice gave way and I went through to the waist. Having my gun in my hand I threw myself forward and the ice held. While in this position I slipped one of my snowshoes from off my foot, the other was too tight for me to release. After about ten minutes in the water I managed to get out, but from the knees down I was soaking wet. From the waist to the knees I had only got wet on the outside, not being in the water long enough for it to penetrate. With the one snowshoe under my arm I made all haste to the camp, but the soles of my feet and all my toes were frozen some. The next morning I had a large blister under each of my toes. For several days I had to travel with my feet wrapped in rabbit skins.

From Walker's lake to Cross lake, Hudson's Bay Company Post, we came across several camps of hunters, to all of whom I spoke concerning forest fires. Most of these families will not return to their respective reserves until open water.

In the immediate vicinity of Cross lake the timber is nearly all burnt, but coming on down to Pipestone lake and east from there some good timber in fair quantities is to be found. As we went, for days at a time, through country and timber of very much the same character there is no lengthy report to give.

A summary of my observations would be as follows:—

First, that there have been very large areas of fine timber (say some 75 or 100 years ago) in this north country. That considerable good timber is still to be found north and east from Pipestone lake and extending to north and east of Cross lake and Walker's lake.

Second, that, so far as I can see,—unless great climatic changes have taken place—there is no reason why (if saved from fires) ninety per cent of the timber should not attain the size and quality it undoubtedly did in the past, viz., two and three feet in diameter, and of good height.

Third, the timber is and always has been of slow growth.

Fourth, the nature of the country is such that (so far as I know) it could not be utilized for other than the production of timber.

Fifth, large areas are growing up again to spruce and pine. There are large quantities of spruce about four to six inches in diameter about fifty feet high.

Sixth, that generally speaking the Indians do not look upon forest fires with disfavour, but regard the same as the best agency in furnishing dry wood at all times in all places.

Seventh, that, while a constant patrol of the water routes will do much to minimize the danger of forest fires, there is so great a mileage to be covered that the only hope of saving our forests here, is in the education of the Indians,—who most frequent these routes in summer time—to see what it means for them especially and the country in general to prevent such fires.

I would like to have had more time around Walker's lake, but we were without dog feed and I could purchase only a few fish from the trappers.

Before getting to Norway House, the dogs took sick and with an Indian hitched on ahead of the dogs and the other pushing we had some difficulty in reaching here. I am sending, under separate cover, a rough map of the route taken and district covered and the result of my work during the trip. I trust this will be of service to you and the department.

All of which I respectfully submit.

JAMES T. BLACKFORD,
Chief Fire Ranger.

No. 21.

REPORT OF P. Z. CAVERHILL.

Department of the Interior,
Forestry Branch,
Calgary, Alberta, April 1, 1912.

R. H. Campbell, Esq.,
Director of Forestry,
Ottawa.

Sir,—I beg to submit the following brief report on the work done by me, for the Forestry Branch, during the year ending March 31, 1912, acting under your instructoins of February 21, 1911, to inspect the lines of railway passing through timbered lands and ascertain from personal observation and from the reports of the rangers whether the requirements of the Railway Act in regard to keeping the right of way free from inflammable material and the regulations of the Railway Commissioners and Provincial Statutes regarding fire-guards were being properly carried out.

Leaving Ottawa on March 4, I proceeded to Winnipeg, thence via Hudson Bay Junction, Melfort and Prince Albert to Edmonton, consulting with the rangers and lumbermen en route. At this time there were from two to three feet of snow along the railway and I could not gain much by personal observation.

Reaching Edmonton on March 17, I made a trip of inspection in company with Mr. McLaggan, the Chief Fire Ranger, of the right of way of the Grand Trunk Pacific Railway as far west as Jasper Lake.

During April I was engaged in organizing a patrol along the lines of the Canadian Northern Brazeau Branch and the Alberta Central west of Red Deer. Having made arrangements for the patrol, acting under special instructions from the Director, I made arrangements for starting a reconnaissance party under charge of E. G. McDougall, on a survey of the Porcupine Hills. This, in addition to assisting Mr. McLaggan in making a report on the fire patrol in the Edmonton district, occupied all my time in May.

Again acting under special instructions from you, I, on June 5, left Edmonton for Prince Albert and Mafeking, and the following five weeks were spent at Prince Albert, Melfort, Dauphin and along the line of the Canadian Northern Railway studying and reporting on the fires which had occurred between these points early in May. These fires were very destructive, burning in the Prince Albert District approximately 1,000 square miles, containing 200,000,000 to 300,000,000 feet of timber and unlimited quantities of wood and young growth. Part of the tract has a good loam soil and will be needed in the next few years to meet the demand of settlers, but much of it is sandy and cannot be brought under profitable cultivation. It was here that the greater loss was encountered owing to the destruction of the young growth on which we must depend for our future timber-supply. This fire was caused by settlers setting out fire late in April when the surface was very dry. High winds arising drove the fires beyond control and several fires uniting caused the great damage.

At Mafeking and Baden, Manitoba, about thirty-five square miles were burned, containing 60,000,000 feet, board measure, and for some hours the property and lives of the inhabitants of the two villages were in danger of destruction, being preserved only by a change of the wind.

After completing the trip I made an inspection of the Canadian Northern Railway and Alberta Central Railway rights of way west of Red Deer; and on August 4, acting under your instructions, I reported to A. Helmer at Calgary and worked under his instructions for the remainder of the year.

In dealing with railway fires, the great essential is a clean right of way. If the right of way has been properly cleaned at the time of construction a great step has been gained, but all brush, grass, weeds, etc., should be cleaned off once a year, preferably as soon as the grass matures in the fall. If the humid conditions are equal, the danger from railway fires is directly proportional to the weight of the ignited matter falling upon it. It has been demonstrated at Purdue University that under ordinary atmospheric conditions the greatest amount of sparks fall between thirty-five and one hundred feet from the centre of the track, and that ninety-five per cent of all railway fires originate within one hundred feet of the track. The 100-ft. right of way, therefore, is not enough for protection but an additional fifty feet on each side should be cleaned, not necessarily of green timber, but of all underbrush and dry surface matter. On the upper side of sidehill cuts a greater distance would have to be cleaned and a ground line constructed along the far side. The cost of the first cleaning would perhaps amount to from $400 to $500 per mile for the brush cleaning, and upkeep from $50 to $75 per year, becoming less each year. If the right of way is properly cleared and guarded a patrol is almost unnecessary except in very dangerous periods and on steep grades; but in order for a patrol to be effective it should cover the entire right of way at least twice each day. When equipped with a speeder a patrolman can travel ten miles per hour and should not be required to cover more than thirty-five miles of track. Special watchmen should be stationed on all steep grades and other especially dangerous points.

Respectfully submitted.

P. Z. CAVERHILL,
Forest Assistant.

No. 22.

REPORT OF H. CLAUGHTON-WALLIN.

VANCOUVER, B.C., April 1, 1912.

R. H. CAMPBELL, Esq.,
Director of Forestry,
Ottawa.

SIR,—I beg to submit herewith my report for the fiscal year ending March 31, 1912.

Field-work was carried on continually from the commencement of the fiscal year to the end of October. From November 1 to this date occasional outside work has been done, but the most of the time has been spent in office-work, such as writing of reports, mapping and compiling of stem-analysis data.

The number of my assistants varied from one during the winter to seven during the business part of the summer. Mr. H. C. Kinghorn has been my permanent assistant from June 9 to the present time.

The work carried on in the coast district of the Railway Belt may be divided under the following headings:—

a. Examination of unsurveyed lines of timber berths.
b. Forest surveys.
c. Stem-analysis work.

EXAMINATION OF UNSURVEYED LINES OF TIMBER BERTHS.

The object of this work, which was begun during 1910, was to ascertain whether or not certain incompleted boundary lines, stated by the surveyor to be inaccessible, could be completed, and whether it would be necessary to survey such unsurveyed portions which were found to be inaccessible.

The unsurveyed boundaries of seventy-five timber berths were examined during the year. In most cases it was found that the uncompleted surveys were on rough, rocky and sometimes inaccessible mountains, where there was little or no merchantable timber immediately outside the berth.

FOREST SURVEYS.

In accordance with your instructions a forest survey was made of the district surrounding Anderson river and its tributaries.

The Anderson river, which has its head-waters on the high mountains in township 7, range 24, west of the 6th meridian, empties into the Fraser river about three miles south of North Bend, and is one of the largest tributaries to the Fraser in the coast district, being about twenty-five miles long and, on an average, forty feet wide and one and a half feet deep during low water. It is bordered on both sides by rather steep mountains reaching a height of from 4,000 to 7,000 feet. The river is quite swift, running through many narrow canyons, some of them with nearly perpendicular walls several hundred feet high. Except for the last three or four miles of its course the Anderson river runs more or less parallel with the Fraser, being separated from the latter river by a high range of mountains.

The Anderson River district is unsurveyed, and it was necessary to find a known point to which to tie our valuation survey. A mining claim post fixed by a previous survey and situated at the fork of Siwash creek near the southwest corner of section 2, township 7, range 25, west of the 6th meridian, was chosen. With this post as a point of commencement, a point in the Anderson river situated in the southeast quarter of section 15, township 18, range 25, was established by traverse. Such traverses of the river and the main tributaries as were found necessary for the establishment of points of reference and a proper system of estimating were then run.

The strip-survey method of estimating was used.

The traverse line along the river was used as a base-line, and strips one chain wide and twenty chains apart were run at right angles to the direction of the river. All merchantable trees of a diameter at breast-height (4½ ft.) of ten inches or more on those strips, or sample areas, were calipered and the diameter at breast-height and merchantable length of each tree recorded.

Thus five per cent of the total timbered area was actually covered by the estimate. Notes on typography and on the general character of the forest and the land were made for each acre calipered, and boundaries of different types and stands were marked on sectional maps in the field note-books. Elevations were taken with aneroid barometers for the making of contour maps.

As the land along the lower course of the river had been repeatedly burned over, leaving the country practically devoid of merchantable timber, only a rough estimate and maps were prepared for this area, while a careful examination was made of the well timbered country in townships 8 and 9, range 25.

The work was delayed considerably on account of heavy rains, especially during the month of September. The rough character of the country also delayed the work, as the area which could be covered in a day's work was not very large.

GROWTH.

The list of tree species growing in the district is large. The following conifer species were found:—

Douglas fir *(Pseudotsuga mucronata).*
Hemlock *(Tsuga heterophylla).*
Mountain hemlock *(Tsuga Mertensiana)*
Red cedar *(Thuja plicata).*
Sitka spruce *(Picea sitchensis).*
White pine *(Pinus monticola).*
Jackpine *(Pinus contorta).*
Amabilis fir *(Abies amabilis).*
Balsam fir *(Abies lasiocarpa).*
Yellow cypress *(Chamaecyparis nootkaensis).*
Yew *(Taxus previfolia).*
Dwarf juniper *(Juniperus communis).*

Alders and poplars are common along the river bottom and vine and dwarf maple form the undergrowth on the slopes.

In relation to the distribution of the different species the Anderson River valley could be divided into the following districts:—

Upper District—Township 7, Range 24.
Altitude along river, 3,300 to 4,000 ft.
Principal species: Western hemlock, Amabilis fir, Balsam fir, Mountain hemlock.

Upper Central District—Township 8, Range 25.
Altitude along river, 2,000 to 3,300 ft.
Principal species: Douglas fir, Cedar, Western hemlock.
Scattered species: White pine, Sitka spruce, Amabilis fir, Jackpine.

Lower Central District—North half Township 9, Range 25.
Altitude along river, 1,400 to 2,000 ft.
Principal species: Douglas fir, Cedar, Hemlock.
Scattered species: White pine.

Lower District—South half Township 9, Range 25, and Township 10, Range 25.
Altitude along river, 300 to 1,400 ft.
Principal species: Douglas fir.
Scattered species: Cedar, with an occasional Hemlock or White pine.

The reproduction on the burns consists principally of Douglas fir, jackpine and some white pine.

Fires.

The old Hudson's Bay trails from Boston Bar and Spuzzum to the Coldwater country go through this district and practically the whole of township 10, range 25, has been burned over, the fires probably originating from the trails. There are tracts covered with poles and young reproduction, but in the main the forest cover is far from satisfactory. The country has now a patchy appearance, there being bunches of green timber, blocks of reproduction, grassy areas and bare slides all intermixed.

The north part of township 9, range 25, has also been damaged by forest fires but the remaining part of this township as well as township 8, range 25, has been comparatively free from this enemy of the forests.

Stem analysis work.

With the object of obtaining data for the construction of growth and volume tables, stem-analysis work was carried on by two student assistants in the coast district during June and July. Three logging operations were followed, viz:—

1.—Timberland, Lumberland Lumber Co's operation at Craig's Spur, six miles southwest of New Westminster.

2.—E. H. Heaps' logging operation at Ruskin.

3.—Rat Portage Lumber Co's operation on the west shore of Harrison Lake just outside of the Dominion Railway Belt on provincial land.

Particular attention was given to Douglas fir.

The following tables based on volume and growth measurements by decades have been prepared:—

1.—Table giving average thickness of bark at different heights of Douglas fir in the coast district. (Based on 175 trees.)

2.—Table showing average thickness of bark of Douglas fir at different diameters breast-high, outside bark, in the coast district. (Based on 175 trees.)

3.—Table showing average thickness of bark of Douglas fir at different diameters breast-high, inside bark, in the coast district. (Based on 175 trees.)

4.—Table showing average heights of Douglas fir at different diameters breast-high, outside bark, in the coast district. Based on 160 trees (by decade measurements 1,460 trees).

5.—Volume table for Douglas fir in Coast forests, showing diameter at breast-height, merchantable length (16-foot logs), and available merchantable contents in board feet by the B. C. official log scale. Based on 160 trees (by decade measurements 1,323 trees).

The actual number of felled trees on which the measurements were taken may seem small, but the data obtained by the measuremnts of tree-sizes at the end of ten-year periods should be very valuable, even if not entirely equivalent to the measurements of the same number of individual trees.

The trees from which data were secured were growing on soil of good or fairly good quality in well stocked mixed-conifer stands. The tables should prove useful in stands of similar character.

The extremely rapid growth of Douglas fir under favourable conditions is astonishing. At Craig's Spur the stand is even-aged, a large fire having swept over this country 172 years ago, and consists of Douglas fir and cedar with associated hemlock and Sitka spruce. The stand is fully stocked but not over crowded. The soil is a well-matured, deep loam.

The rapid growth, in this particular locality, of Douglas fir is shown by the following age-diameter at breast-height and age-height table, based on decade measurements of seventy Douglas fir:—

(Ave. D.B.H. O.B. 44·8″
Ave. D.B.H. I.B. 39·3″
Ave. Tot. Height, 199′
Ave. Tot. Age, 160 years.)

Age.	Average Diameter at Breast-height.	Average Annual Growth in each Decade.	Average Total Height.	Average Annual Height—Growth in each Decade.
Years.	Inches.	Inches.	Feet.	Feet.
10	1·6	....	6	...
20	5·6	0·40	30	2·4
30	10·7	0·51	59	2·9
40	15·0	0·43	82	2·3
50	18·9	0·39	101	1·9
60	22·0	0·31	118	1·7
70	24·8	0·28	134	1·6
80	27·5	0·27	146	1·2
90	30·0	0·25	157	1·1
100	32·4	0·24	166	0·9
110	34·6	0·22	174	0·8
120	36·8	0·22	181	0·6
130	39·0	0·22	187	0·6
140	41·2	0·22	193	0·6
150	43·2	0·20	198	0·5
160	45·2	0·20	203	0·5
170	47·0	0·18	207	0·4

At Ruskin and Harrison lake the stands when the analyses were taken are many-aged, and the trees examined had been growing under such variable conditions that to construct age-height and age-diameter tables from the data secured would hardly be worth attempting. Instead, tables showing the average rate of growth of Douglas fir of different sizes will be prepared.

In both places the stand is a many-aged, well-stocked virgin and mature conifer stand, consisting of approximately sixty per cent Douglas fir and forty per cent red cedar, hemlock and white pine growing on a fairly deep sandy-gravelly soil, mixed with granite boulders.

The data compiled at the Harrison lake operation indicate that the following figures for diameter at breast-height and height growth of dominant and co-dominant Douglas fir in that locality are fairly good averages:—

At 80 years the diameter at breast-height is 24 in. and the total height 120 feet.

At 160 years the diameter at breast-height is 36 in. and the total height 175 feet.

At 240 years the diameter at breast-height is 43 in. and the total height 190 feet.

While not as rapid as at Craig's Spur, this growth must be considered very good. It is to be remembered, however, that these figures are averages of the growth of the best trees only. It is probable that at least this average growth can be attained under proper management in this and other localities of a similar character on the coast.

The logging operation followed at Harrison lake is in a fairly representative Douglas fir type.

The investigations which have so far been carried on amongst the Douglas fir in the Coast District show:—

(1) that Douglas fir prefers a well watered, deep, loamy soil, but that it does well also on poorer soils, provided there is abundant atmospheric moisture. It does not thrive on saturated and poorly drained soils;

(2) that Douglas fir reaches its best development in even-aged stands where it can get sufficient overhead light;

(3) that Douglas fir is a prolific seeder, spreading its light, winged seeds for a considerable distance, but that it has great difficulty to gain a hold on the logged-over areas, covered with debris, which are, instead, generally restocked by cedar and hemlock which are tolerant of shade. Exposed mineral soil and direct light are necessary for Douglas fir seedlings. That is the reason why Douglas fir generally restocks the burns on the coast. To secure satisfactory reproduction —natural or artificial—after logging, it will, in nearly every case, be necessary to burn the debris.

(4) that as Douglas fir is on the coast a very rapidly growing tree, the rotation, even if fairly large saw material is desired, would be comparatively short. For the sake of comparison, I may mention that in certain parts of Northern Europe where the timber industry is the chief asset of the country, it takes from one hundred to one hundred and eighty years to grow a stand of Scots pine of an average diameter of twelve inches, while in the Coast District of British Columbia a stand of Douglas fir of the same average diameter can be produced in thirty to forty years. It must be remembered, however, that the best grades of lumber can be obtained only from old trees.

(5) that fungi and insects do very little damage to Douglas fir which are not overmature.

A volume table for Douglas fir based upon total height is now under preparation, as are also growth tables.

Stem-analyses were also taken on cedar and spruce, but the number of trees examined is much too small to enable me to construct any volume or growth tables for those species.

Respectfully submitted,

H. CLAUGHTON-WALLIN,
Forest Assistant.

No. 23.

REPORT OF G. H. EDGECOMBE.

Office of the Commissioner of Dominion Parks,
Edmonton, Alberta, March 30, 1912.

R. H. Campbell, Esq.,
Director of Forestry,
Ottawa.

Sir,—Under your instructions of the 12th instant, I am submitting my annual report of the past year, which has been spent on that part of the Rocky Mountain Forest Reserve now designated as the Brazeau and Athabaska Forest Reserves.

The chief work of the year was the continuation of the eastern boundary of the Rocky Mountain Forest Reserve from the 11th base line, at section 32, township 40, range 12, west of the 5th meridian, norwesterly to the 15th base line, at section 33, township 56, range 25, west of the 5th meridian.

Leaving Ottawa on April 3rd, I spent the next month in outfitting for two parties and getting in supplies at various points, also in going over the country around Prairie Creek, where it was decided that work would be started.

On May 8th, the two parties that were to carry on the work started at Prairie Creek on the Grand Trunk Pacific Railway and Athabaska River, one working southerly, the other northerly under the leadership of Mr. S. H. Clark and Mr. E. H. Finlayson, respectively. The work of the whole summer was delayed by excessive rains. The months of May and June I divided between two parties, while July and the latter part of September to December I spent with the southern party. August and the first part of September were spent with the northern party. As the student assistants were obliged to return to college in September and the first part of October, the northern party was disbanded October 7, but the work of the southern party was continued on into November, when the party crossed country from the little Brazeau to Bickerdike (on Grand Trunk Pacific Railway), where it broke up December 12. On December 20, I went to Edmonton, where, during the next month, I prepared a report and maps on the summer's work.

As the object of the reserve is to furnish a supply of wood to the prairies and coal mines and protection to the watershed, you will notice by the previous report that the proposed boundary practically includes the coal district and, as far as practicable, the true woodland, wherever possible natural boundaries, such as rivers, being chosen.

The country is one abounding in muskeg and wind-fall, the latter the result of fires twenty-five to forty-five years ago. It is more rough and broken than that to the east, increasing in height and steepness of slopes as the first range of mountains is attained, these standing abruptly above the foothills. The rivers flow in a general direction northeasterly, the Baptiste, Little, South and North Brazeau flowing into the North Saskatchewan, while the Pembina, Embarras, McLeod and Hay rivers flow into the Athabaska.

The factors defining the boundary were, as in the previous year's work, (1) topography, (2) soil, (3) climate, (4) elevation and (5) timber.

(1) *Topography.*—In a general classification, the hills, 250 to 500 feet above the valleys, conform to the trend of the rivers, along which alternate steep 'cut-banks' and small hay and timber flats. Back from the rivers are a series of steep terraces and muskegs until the height of land is reached, then a similar descent to the next river. In districts, as at the Pembina River, many deep ravines cut into the hills. Thus there are no large consecutive areas of arable land that will be desired in the near future for farming.

(2) *Soil.*—The soil of the river bottoms is a sandy loam, fairly deep and underlaid with gravel. The soil of the upper slopes becomes light. Rocky exposures are common, while all through the district there are large areas where the humus has been burnt off by repeated fires. In the muskegs the top soil or decayed humus varies from fifteen inches to four feet.

(3) *Climate.*—Throughout the summer frosts were encountered almost weekly. Rain this year was excessive, while snow (ten inches) fell on September 20, but soon disappeared; snow came to stay, however, on October 24.

(4) *Elevation.*—An elevation of 4,000 feet was mostly followed but, on account of excessive muskeg or the nature of the country, this elevation was in districts lowered to 3,800 feet.

(5) *Timber.*—The following is a tabulated statement of the tree growth throughout the district through which the boundary was run, and it may be taken as a fair average of the reserve east of the first range of mountains, west of which bare limestone ridges will form a large percentage of the area.

Timber	11%
Muskeg	11%
Poplar and willow	24%
Pine and spruce, pole size and under	50%
Grazing	4%

FIRE PROTECTION.

To cope with the fires, the fire protection is a most serious, indeed the all-important question. While the plans for the coming year include a telephone system to be put in and direct trails and fire-guards to be cut out, the remoteness of districts from ready assistance has to be contended with, as everywhere the ground is strewn with dense wind-fall, which, when a fire occurs, it is next to impossible, especially for a small number of men, to control. Until the present plans can be carried out, with the country thus divided up, the protection is at a disadvantage, but with attention and co-operation in those districts where railways are being constructed, coal mines developed and trails frequented, it is hoped that success will be gained.

During the coming year the Coal branch of the Grand Trunk Pacific Railway will be completed to the Mountain Park Coal Company's mines at the head of the McLeod river, also to the Yellowhead Coal and Coke Company on the Embarras river and to the Pacific Pass Coal Company's mine on the Pembina. In the south the Canadian Northern Railway will be constructed to the Brazeau Coal Company's mines a few miles west of the Mire Creek Gap in the first range of mountains.

The above mines are developing their claims preparatory to the railways reaching them.

Under your instructions of May 10, the last ten days of June were spent in estimating the tie supply between the west and main forks of the McLeod river and north of the 13th base line.

Contrary to the reputed stories that this district is covered by virgin timber, out of the twenty-six and three-quarters square miles (17,120 ac.), 24·1 per cent bears merchantable spruce and pine, 25·5 per cent is muskeg, 49·1 per cent of young pine and dense wind-fall, the result of fire, and 1·3 per cent of open grazing land. It was decided that this timber could be more economically used as mine material, thus avoiding the excessive waste in cutting ties.

From September 20 to October 3, I took a trip to the Kootenay Plain district on the North Saskatchewan river.

West of the Saskatchewan River Gap, particularly on the south exposures, there extends a good grazing country. About ten miles west of the The Gap several squatters are located because of this grazing.

The Kootenay Plains extend west from the Whitegoat river for about fifteen miles. They are flats a quarter of a mile to one mile wide, alternating on both sides of the Saskatchewan. Back from these plains extend the Brazeau mountains. Last fall, this district appeared to have been overstocked, as the grass was very sparse and light. Here, besides the Indians, there is a squatter located. Besides having a large area fenced in, he has several well built houses. The Indians are from the Stony Indian Reserve and come to the plains because of the game as well as for the grazing.

In February a tract on the Stony river, just north of the Jasper Park boundary, was examined in regard to its tie supply. This district is mountainous, the soil is light, the district having been fire-swept twenty-five and forty years ago, though a few small areas of merchantable spruce and pine escaped the fires. As it was evident that the timber was desirable for protection of the water-shed and for reproduction purposes, it was recommended that the timber should not be cut at the present time. Again, it is likely that there would be difficulty in driving Stony river, as it is meandering, subject to floods, and, at low water, gravel-bars and boulders would add to the difficulties.

The last of February and the first week of March were spent going over areas affected by the Mountain Park Coal Company's applications for surface rights for the development of their mine, and timber and land desired for agricultural purposes, as directed in your instructions of February 10.

As regards the surface rights, 165 acres of open land along the McLeod river and at an elevation of 5,800 to 5,900 feet was defined that would be desirable for a townsite and for the operation of Colliery No. 1, and would overlie the underground rights of coal leases Nos. 334 and 335.

The timber on the surface of coal leases Nos. 334 and 335 is the alpine type of spruce and pine. It is of poor quality as regards saw material, because of its rapid taper and persistent branches It was estimated that on these leases there is enough mine material to supply the mines for twenty years at an output of 50,000 tons of coal per month.

Concerning the land required for agricultural purposes, 340 acres in sections 5, 8 and 17, township 47, range 24, locally known as Greasebone Flats was gone over. The elevation of this flat is 5,400 feet, 80 acres of which at the south end is covered by wind-fall and jackpine reproduction. If the remainder, 260 acres, were broken and seeded to grass, there is no doubt but that a good return could be had. The timber on this flat occurs in small groves of spruce, likely amounting to about 12,000 feet, board-measure, of lumber.

As a tie permit had been applied for on a tract west of the Grand Trunk Pacific Railway, under construction to the Mountain Park Coal Co.'s mines, between stations 285 to 338, I went over this, finding that some construction timber has been taken out. The timber is of spruce of the river-bottom and lower-slope type. Immediately west of this flat is a mountain, the upper slopes of which are composed of bare limestone.

On this tract, between the above stations but west of the McLeod river to the base of the mountain, about 45,000 ties could be cut out without detriment to the district, as most of the timber is overmature.

On March 12th, I left Edmonton to go over the Canadian Northern Railway's right of way west of Rocky Mountain House, returning here March 23rd.

Most of the right of way to the Brazeau Mines has been fairly well cleared up. West of Mire Creek Gap the right of way has been cleared to Brazeau River, but this line is to be revised. It is not likely that construction will be carried on here this season.

Some attempt was made to pile the brush where construction timber has been taken out, but on the whole, this is rather unsatisfactory, as there is considerable merchantable timber fit for ties that has been left.

The requirements of the Brazeau Collieries for timber and a townsite have been left off till May, when they will make definite application for what areas they require of timber and for their operations.

Respectfully submitted,

G. H. EDGECOMBE,
Forest Assistant.

No. 24.

REPORT OF E. G. McDOUGALL ON PORCUPINE HILLS, ALTA.

Department of the Interior,
Forestry Branch,
Ottawa, September 3, 1912.

R. H. Campbell, Esq.,
Director of Forestry,
Ottawa.

Sir,—I beg to submit the following report on the work which I have carried on under your instructions in the Porcupine Hills, Alberta, during the past summer.

THE SURVEY.

Objects.—The primary object of the survey was the location of the boundaries of the land in this region suitable for forest reserve purposes; the secondary object, an examination of the land recommended for reservation, to determine the quantity and quality of the timber, the best means of protecting it from fire, and other questions bearing on the administration of the forest reserve. This purpose involved the preparation of topographical and type maps of the reserve area.

Time in Surveying District.—The party, seven all told, left Claresholm on the 26th of May, and returned there the 23rd day of August.

Much of the month of June was spent in getting accustomed to the work. By the end of that month, seventy-six sections of land had been mapped, and nineteen and one-half miles of boundary were located. In July, with much worse weather conditions, one hundred and thirty sections were mapped and forty miles of boundary located. Early in August I received instructions to proceed as soon as possible to Prince Albert in order to make an examination of a tract in that locality. Accordingly, it was necessary to discontinue the mapping and make haste to complete the boundary; on the 22nd of August, the remaining fifty miles of boundary were completed.

Methods of Survey.—I was instructed to include within the reserve, as far as possible, all lands above 4,000 feet in elevation which had not already passed into private hands. The boundary, in fact, was largely determined by the position of the private holdings above this elevation. Homesteads and other patented lands were left out whenever this course seemed at all practicable. Where homesteads had to be included within the reserve, we obtained full information regarding the residence and improvements of each homesteader, and reported thereon.

At Mr. Caverhill's suggestion, boundary stakes were planted at intervals of half a mile; they were cut from spruce, pine or Douglas fir saplings, about three inches in diameter and three feet long; they were peeled, squared and marked 'D.F.R.' on the outer face.

In mapping, it was our practice for two men to go together, following surveyed lines where these could be traced, and sketching the country half a mile on each side of the line. Distances were measured by pacing, and elevations by means of the aneroid. Contours were sketched in at intervals of 500 feet. A complete description of each section visited was written on the forms provided. Small patches of timber were tallied by means of quarter-acre circular plots. When a large stand was located, the whole party would take a day to cruise it by the strip method.

THE PORCUPINE HILLS, NATURAL FEATURES.

Topography.—The Porcupine Hills are an outlying ridge, parallel to the Livingstone range, from which tney are separated by a deep synclical valley, (hereafter referred to as 'the valley'), open at both ends, and drained northwards by Willow Creek and southward by Callum Creek, which joins the North Fork of the Oldman river. The main divide of the Porcupine runs from about section 25, township 13, range 2, west of the 5th meridian, to about the south end of township 9, range 30, west of the 4th meridian. Long spurs run eastward from the main ridge, dividing the coulées of the Willow, Lynden, Trout, Burton, Burke, Muddypound, Kyiskap and Beaver Creeks. On the west of the ridge, the streams tributary to Willow and Callum Creeks are smaller; the erosion has consequently been less, and the spurs are shorter.

West of the valley arises a series of three steep and parallel ridges. The middle and highest of the three, sometimes called the Lloyd range, is about as high as the main Porcupine range, and is continuous from Willow creek to the North Fork of the Oldman river; the other two are lower, and broken by gaps. Behind these ridges rises the lofty Livingstone range.

The ridges throughout the region are usually quite steep; the valleys, however, are broad and flat, and the lower slopes gentle.

Rock and soil.—The rock formation is a medium fine-grained cretaceous sandstone, almost destitute of fossils. Towards the foot of the Livingstone range, the formation changes, and indications of coal are sometimes met with. Occasionally, in the Porcupine range, igneous boulders, granites, syenites, &c., are met with, apparently having been transported by glaciers from the neighbourhood of the Churchill river.

The prevailing type of soil in the hills is a light, rather sandy clay. Rock outcrops are not extensive. Gravels are only found in the beds of the larger streams.

Climate.—The climate of the Porcupine Hills is characterized by such extreme variability that the inhabitants sometimes deny its very existence. The summer of 1910 was so dry that many large streams ceased flowing; and that of 1911 was decidedly the reverse. Nevertheless, we were often told that the streams had not yet regained thir normal level, from which it would appear that the ground had dried to a great depth. 'Chinook' winds break up the winter, and snow persists only in the shade of the trees. Snowstorms, however, have been known to occur in every month except July; and severe frosts may be expected any night in the year.

Fires.—The season of greatest fire-danger is in the fall, when the dry grass and high western winds make a dangerous combination. The great fire of 1910, whose ravages are apparent from a glance at the map, took place, however, in the spring before the frost was out of the ground.

There is every reason to believe that, with the assistance of the frequent grass fires, the prairie has been gaining on the forest for a long period; and that, unless the fires can be effectually checked, the day is not far distant when the forest cover will have vanished completely from the Porcupine Hills.

Grass and scrub.—Grass is everywhere abundant, and in some of the coulees is so luxuriant that it may be cut for hay. Unfortunately, it is by no means free from poisonous weeds. In the autumn it cures, and from thenceforth constitutes a menace, which may be greatly reduced by judicious grazing. The settlers state that grass fires are decidedly injurious to the range.

Young growths of aspen poplar, together with willow bush, form dense clumps of brush, widely distributed over the grass-lands. Since they serve the stock for shelter, they are not without value.

Tree growth.—The principal trees of the Porcupine Hills are the following:—

Douglas fir, *Pseudotsuga mucronata,* Sudw.
Engelmann spruce, *Picea Engelmanni,* Engelm.
White spruce, *Picea canadensis,* B.S. & P.
Lodgepole pine, *Pinus Murrayana,* Engelm.
Limber pine, *Pinus flexilis,* James.

In addition, there are aspen (*Populus tremuloides*) (widely distributed, but rarely large enough to be classed as a tree), balsam poplar and cottonwood (*Populus balsamifera* and *Populus acuminata*), both rare and confined to the banks of streams at the lower levels.

The Douglas fir is the chief timber tree. Its thick bark has saved it from the grass fires which destroyed its associates; and it survives in extensive parks, sometimes closely enough spaced to be classed as timber, 2,000 to 5,000 feet per acre. In these positions its form is naturally very poor, low and limby, and it may generally be counted on to be unsound at the butt. Where it grows scattered, it may be kept as a seed-tree, since it is fit for little else.

In the denser stands, both of poles and timber, spruce and lodgepole pine almost equal the Douglas fir in importance. White and Engelmann spruce are intermixed in, approximately, equal proportions, and are very similar in site requirements and habits of growth. Lodgepole pine attains a diameter of 18 to 24 inches, and a height of 70 to 90 feet.

The limber pine, small and crooked, occurs on all the high rocky ridges, and, like the aspen, is of little use except for fuel and as a slight protection to the soil.

On the whole, a very small proportion of the country enjoys an effective forest cover; much that has been mapped as timber is so open that its influence on soil-moisture and stream-erosion cannot be very great.

Fish and game.—The streams arising in the Porcupine Hills were formerly well stocked with trout, but the dry summer of 1910 reduced their number considerably. Grouse and prairie chicken are plentiful everywhere, but the large mammals were rare; a few deer and bear were seen by members of the party. Tracks of timber wolves were not infrequent in the remoter parts; and coyotes were fairly plentiful. Elk antlers and buffalo skulls were frequently seen, but the range cow has long since replaced these animals.

ECONOMIC CONDITIONS.

Communications.—Trails have been constructed by settlers, and others by sawmill owners with a certain amount of care; but for the most part the hill trails are simply travelled wagon-tracks, meandering about in search of the easiest passage. The ridges divide the country sharply, and only the older settlers know much of local geography 'on the other side of the hill.' One of the hill trails, from Burton's to Playle's, is much used; for the other roads leading out of the valley cross streams which are sometimes impassable. Unfortunately, the grade is too steep to permit the removal of much lumber by this route at present. Improvement of the road would be possible but costly.

Irrigation.—Irrigation ditches have been constructed in many of the valleys, often, apparently, for the purpose of acquiring title to land, but sometimes, on the lower levels, for actual use in assisting cultivation. Above the level at which grain can be successfully ripened, there would seem to be little reason for official encouragement of irrigation, which merely diverts water that might be more profitably employed lower down.

There is a marked difference in the flow of streams from wooded and grassy valleys of similar size. The dryness of the grassy valleys may be attributed in part to factors of exposure, depth of soil, etc., and considered as a cause rather than an effect of the absence of forest cover; but such an explanation is not entirely satisfactory, and the facts, if they do not conclusively prove the importance of forest influence on stream flow, at least establish a presumption in its favour so strong as to amount practically to certainty.

Agriculture.—Owing to the frequency of summer frosts in this region, grain cannot be ripened with any certainty at a greater altitude than 4,000, or, at most 4,200 feet. Above this level, where the slopes are not too steep, the settlers raise hay and green feed for the stock, and cultivate the hardier vegetables.

Grazing.—Stock-raising is the chief industry in the immediate vicinity of the Porcupine Hills. Formerly, large ranchers occupied most of the country and some of the choicer parts are still in their possession. More recently, however, the homesteaders have made a place for themselves, in the teeth of the sharpest opposition. It may be generally asserted that, once established, they have quickly become as keen as their predecessors to exclude newcomers and remove neighbours by any means in their power. The local atmosphere of bitterness and jealousy astonished all of us; but the reasons for it are not far to seek. In order to maintain a family in moderate comfort, a man requires at least one hundred and twenty head of stock and hence he needs the unrestricted use of about six sections of range. The homesteaders, however, seldom have so many cattle to start with, and cannot lease so much land; hence, they have no assurance of room for future expansion, and see themselves threatened with permanent pauperism. Under the circumstances, it is not altogether surprising that every man's hand is against his neighbour, and that accusations of theft, cattle-poisoning, and malicious incendiarism are heard on all sides.

Most of the smaller owners have located their homesteads in or near the mouth of a coulée in which they run their stock. Those who have taken the precaution of leasing the coulée have had no reason to regret it. Close neighbourhood among these people makes inevitably for trouble.

Lumbering and wood-cutting.—Lumbering operations have contributed largely to the deforestation of the Porcupine Hills. Abandoned mill-sites were seen in most of the coulees. The largest mill, in Beaver Creek valley, long supplied the town of Macleod with lumber; it is now a ruin and the slash is burned over.

A mill on Burton creek is still in operation, and settlers come to it for their lumber from a considerable distance. It may be safely stated that the merchantable timber on the eastern side of the hills is rapidly nearing the point of complete exhaustion. The large stands on the western slope are, as already intimated, practically inaccessible to dwellers on the east; moreover, certain contingencies, such as the construction of a railroad through the valley and the subdivision of the Waldron ranch, might quite possibly create an adequate market for lumber on the west side of the range.

Many farmers and townspeople from the prairie drive to the Porcupine Hills for the purpose of cutting wood for domestic use. They have been taking both green and dry timber, and have paid no dues on either. The supply of fire-killed timber alone should be equal to the demand for the next decade.

Recreation.—On account of their ready accessibility from a productive farming country, their natural beauty and their supply of fish and game, the Porcupine Hills are already a favourite resort of pleasure-seekers. In the future, with the increase of population, their value in this respect will be greatly enhanced, always provided that the forest cover can be maintained and extended. Without it, the hills would lose their attractiveness, and both fish and game would soon disappear.

RECOMMENDATIONS.

Roads and trails.—A complete set of trails, connecting lookout points, following the ridges where possible, and (no slight advantage) enabling the patrol to watch the country with his field-glasses without being seen, is projected by the ranger, who has already constructed several sections. Where the trails thread grassy valleys, they could be first ploughed as fire-guards, after which a diligent patrol would keep them well beaten. On the ridges and in the timber the trails would soon be well-worn, and could be used, in an emergency, as lines from which to back-fire.

The need of a good wagon road crossing the main ridge has already been mentioned. By improving the valley trails and bridging Willow creek or Oldman river, the same end might be gained, perhaps with less expense.

Fire-guards.—Ploughed fire-guards are the most satisfactory, and, for the most part, there is enough open ground to permit of their construction. It will be necessary, in some cases, to run them across privately owned land. A great deal of hill-ploughing and some brush-cutting will be called for, so that the expense and labour will be very considerable, even if only single furrows are used. The ranger should be allowed such assistance as he requires for the construction and maintenance of a system of fire-guards (of which the well-travelled trails should form an integral part) surrounding and intersecting the whole reserve.

Grazing regulations.—From what has been said regarding the grazing situation, it is plain that very close supervision of the range is absolutely necessary. The larger owners have more cattle than the reserve can accommodate, and by the statutes of Alberta they are not bound to fence or restrain them. The smaller owners fear that the extinction of their leases and the removal of their fences would be followed by an invasion of their pastures by trespassing herds. The ranger's only remedy, when he finds trespassing cattle, unless he can detect the herdsmen in the act of bringing them in, is to put them off, though, to be sure, he is under no obligation to put them off on the owner's-side of the range.

A three-strand barbed-wire fence, such as the Alberta statutes call for, would cost at least $100 per mile, or, say, $10,000 to enclose the whole reserve. Without such a fence, a single ranger, watching about thirty brands, would find it almost impossible to prevent great damage by trespass, and destructive, even if secret, warfare among the cattle owners.

It would seem that the most practicable way to avoid a Canadian edition of the Montana sheep and cattle wars would be to continue and extend the system of individual leases, which has served that purpose fairly well up to the present time. Two plans have been suggested: (1) to buy out the small owners and lease the grazing, on extensive ranges, to the large ranchers, or (2) to retain the small owners, giving them the exclusive right to the grazing on the coulees where they are located, and grant such rights to large owners only when they are similarly situated. The latter plan would be less expensive, and, if properly worked out, more conducive to the fullest use of the resources of the country. It is well adapted to local topography and customs, and would involve no fencing on the government's part. Each man involved should be strictly limited in the number of cattle he might keep, and, to avoid complication, he should own no range outside of the reserve. His homestead, with the range attached, should be converted into a single leasehold, forfeitable for misconduct; and the leaseholder would be, in effect, an assistant ranger, responsible to the Chief Ranger for the prevention of fire and trespass in his particluar range.

Cutting regulations.—As already indicated, very little merchantable timber remains on the east side of the Porcupine Hills. If local scarcity is so great as to make its utilization profitable, the cutting should be carefully supervised, and a sufficient number of seed-trees left to assure propagation. The tops should be downed, but burning, in most cases, would be superfluous and dangerous.

The dense stands on the west slope may be best treated by the selection system, using a diameter limit of about sixteen or eighteen inches for the first cutting, to avoid too great an interruption of the crown cover.

As I have previously implied, the cutting of firewood should be limited to dead material. Building logs may be allowed to adjacent settlers when they may be cut without injury to the forest; but few of the stands are dense enough to fulfil this condition.

Fish and game protection.—An attempt should be made to co-operate with the provincial authorities in enforcing the game laws. Trout and deer should have a close season, and systematic war should be waged on the timber wolves. The coyotes, however, may be tolerated, since they are not very dangerous to cattle or deer, and are probably of service in keeping the rabbits in check. When game has re-established itself, permits to enter the reserve for the purpose of hunting, shooting or fishing in season may well be issued to reputable residents within the fifty mile radius.

Respectfully submitted,

E. G. McDOUGALL,
Forest Assistant.

No. 25.

REPORT OF E. G. McDOUGALL ON LANDS NEAR FORT A LA CORNE, SASKATCHEWAN.

Department of the Interior,
Forestry Branch,
Ottawa, January 4, 1912.

R. H. Campbell, Esq.,
Director of Forestry,
Ottawa, Ont.

Sir,—As instructed by you in your letter of November 6, I have made a short reconnaissance of non-agricutural lands in the vicinity of Fort à la Corne, Sask., with a view to determining the boundaries of the land suitable for forest reserve purposes. Herewith I present a map of the area examined, with the proposed boundary marked in green.

As stated in my report for the month of November, two areas south of the river were found to be unsuitable for agriculture, and are recommended for reservation. The prevailing type of soil is sandy and the timber is jackpine, attaining a size of about twelve inches by fifty or sixty feet, suitable for ties or building logs. The country is by no means covered with timber of this type, however. There are considerable park-like areas, large muskegs fringed with spruce and tamarack, and extensive burns, not all of which are restocking. A fire last year burned over a large tract to the east of the Hudson's Bay Company Reserve. Much of the large jackpine timber has been wind-thrown, both by uprooting and by breaking at the butt. I have not sufficient data for an estimate as to the number of pieces available.

It will be noted that a piece of land in the angle between the main Saskatchewan river and the south branch has been left out of the reserve. The land here is open or scrubby, with aspen on the lower levels, and may be of some use agriculturally. Moreover, one quarter-section near the Forks has been sold, and four others homesteaded. So far as I was able to ascertain, the places are unoccupied at present; but it seemed best to avoid complications by leaving out this block of rather doubtful land.

Two other pieces of land, to the north of the river, have been left out of the reserve there for the same reasons, namely, that it is possibly an agricultural area and that there are existing claims upon some of the land. One piece, in townships 48 and 49, range 20, west of the second meridian, is an elevated scrubby plain, like that just described. Half a section there has been leased by the Church Missionary Society. The other block, in twonship 29, ranges 17 and 18, is said (by hunters who passed through it, and were met just north of it) to be an excellent poplar flat, bounded on the north by marshes and broken poplar land. The northeast quarter of section 31, township 49, range 17, belongs to the Canadian Northern railway.

The examination of the land to the north of the river lasted from November 24 to December 13. Owing to the unusual depth of snow, it was necessary to carry all the horse feed; so two flat sleighs and two assistants were required. For the most part we followed summer trails, making short side-trips, when possible, to reach and determine the boundaries of the agricultural land. Under the circumstances, the location of the boundaries could not be very thorough; but in many cases the types were so much intermixed along their edges that even after a much closer examination a straight and somewhat arbitrary boundary would probably be preferred. Of course, a closer examination is greatly to be desired, both to modify the boundary where necessary and to determine the amount of the timber.

For the rest, the land which was examined on the north side of the river is of the same type as that just described for the south side. The muskegs, indeed, are more extensive, the parks less so; but the bulk of the timber is still jackpine of good size, severely injured by fire and windfall. Spruce trees, singly and in clumps, along the creeks where they attained a diameter of from 24 to 36 inches were met with, but there was no heavy stand of such large-sized spruce timber.

On the north the sand-muskeg type passes over into a loamy poplar type with sloughs replacing the muskegs. On the south a belt of hilly poplar country generally intervenes between the sandy type and the river. The soil in this type is excellent, but the surface is so badly cut by ravines that practically none of the land is available for agriculture.

To the eastward the jackpine belt narrows to a breadth of three to four miles, and is said to continue northeast at a distance of two to four miles from the river into township 51, range 13, west of the second meridian. I had not time to follow it out in this direction and would not recommend that this portion of it should be included in the reserve, since it would be difficult to separate from the agricultural land. A similar belt to the south of the river separating the Lost river and Carrot river settlements contains a large proportion of fair agricultural land: there is, moreover, a settlement already established on the north side of the river in range 15. Another settlement in ranges 22 and 23 marks the western limit of the reserve north of the river.

I would recommend, therefore, that a forest reserve should be established in this region for which I should suggest the name of the La Corne Forest Reserve.

Respectfully submitted,

E. G. McDOUGALL,
Forest Assistant.

No. 26.

REPORT OF E. G. McDOUGALL ON LANDS NEAR PRINCE ALBERT, SASK.

Department of the Interior,
Forestry Branch,
Ottawa, February 6, 1912.

R. H. Campbell, Esq.,
Director of Forestry,
Ottawa, Ont.

Sir,—I beg to submit the following report on work which I have carried on under your instructions, in the neighbourhood of Prince Albert, Saskatchewan, during the past fall.

NATURE OF THE WORK.

The object of the survey was the location of the boundaries of the non-agricultural land adjacent to the Nisbet and Pines forest reserves, with a view to the extension of these reserves. In addition, it was necessary to obtain full information regarding the residence and improvements of a large number of homesteaders, who had located upon very poor land adjacent to the Nisbet reserve.

The party, six all told, was rather cumbersome for the rapid examination of an extended boundary. Accordingly, it was divided for a time, two men going up the river with a canoe, and two going east with a team. The best results were obtained with parties of two men with a conveyance and a light outfit.

TIME IN SURVEYING DISTRICT.

The party, which had been occupied during the summer in southern Alberta, arrived in Prince Albert on August 31, and broke up when the colleges opened; two of the students had to leave on September 9, and the other two stayed on until the 21st of that month, when the cook also left. By that time most of the distant work had been done, and I was able to continue single-handed, working mostly from Prince Albert. The local rangers gave me much assistance, particularly when I visited the Pines reserve.

From November 1 to December 17 I was engaged in the examination of a similar tract of country in the vicinity of Fort à la Corne. This work has been elsewhere reported on, and is only mentioned here because the accompanying descriptions apply to it very closely.

CLIMATE OF THE DISTRICT.

The summer climate of the Prince Albert country is very pleasant, as a rule, although last year there was not enough warmth to mature the crops. On account of the cool summers, heavy soils, especially if wet, are less productive than somewhat sandy soils.

The winter climate is decidedly severe, and the older residents, instead of growing habituated to the cold, frequently become more sensitive to it. Of course, the cold is much more bearable where forest growth gives shelter from the cutting winds.

The muskegs and sloughs with which much of the country is covered are excellent breeding-grounds for mosquitoes, but last year was too cold to coax them out and they were practically absent in September.

TOPOGRAPHY.

The North Saskatchewan river flows between banks of varying height, fringed with a narrow belt of spruce, aspen, balsam poplar and paper birch. Three fair-sized tributaries (the Shell, Little Red and Sucker rivers) enter it from the north; the two former convey many sawlogs from remote limits to the mills at Prince Albert. Though both the main river and the tributaries have a stiff current, the country is level to the eye and very poorly drained, being half covered with lakes, sloughs and muskegs.

SOIL.

A long sandy belt, perhaps a post-glacial lake-shore, commences in the Pines Forest reserve, crosses the North Saskatchewan river, and curves around to the east, passing close to Prince Albert, and 'fraying out' about ten miles farther east. Its width varies from three to six miles and there is an isolated tract of similar character to the north on the Shell river. After a break of about twelve miles, the sand belt reappears, much broader but less sharply defined, on both sides of the united Saskatchewan river. On the south side it soon 'frays out' in a series of isolated ridges and muskegs in a poplar country; while on the north, it continues eastward with varying width and some breaks, for an unascertained distance, leaving the river near Fort à la Corne and returning to it near Birch island, about fifty miles below.

Between the sandy belt and the clay-loam country to the north is a fairly continuous chain of sloughs and muskegs. Isolated muskegs are common in the sand type, and isolated sloughs, passing imperceptibly into lakes, in the other.

The outstanding types of soil, then, are:

1. Sand.
2. Clay loam.
3. Slough.
4. Muskeg.

Of course, there are intermediate grades, especially between 1 and 2.

TREE GROWTH.

The region described is in the transition area between prairie and woodland, and, though the latter predominates, the former also occurs in small areas (as seen on the map of the Pines reserve) on both sand and clay types.

Each type of soil has its typical arborescent flora, the jackpine on the sand, the aspen on the clay loam, with white spruce and balm replacing it on wetter sites, and the black spruce and tamarack bordering the muskegs. The paper birch is sometimes met with in gravelly places. The jackpine is here close to its optimum; it grows with great rapidity, and reproduces abundantly on the poorest sites. It does not attain large dimensions, fourteen inches being an exceptional diameter. Moreover, it is seriously afflicted by a parasite which covers it with witch's brooms.

The aspen, on suitable sites, attains a diameter of ten or twelve inches. It is used at present for cordwood, and in future may have a value for pulp.

The white spruce, commonest near streams, attains a maximum diameter of 36 inches. Unfortunately, trees of such size occur only singly or in small groves.

The slack spruce and tamarack of the muskegs are stunted where there is too much water, but on the margins attain diameters of ten to fourteen inches. The tamarack is as yet untouched by the saw-fly, and it is to be hoped that some means will be found to save it from this pest, for the wood, though scarce, is the best the country affords for wagon tongues and similar purposes, and for fuel.

The paper birch is also rare, and shares the special uses of the tamarack. It does not attain sawlog size.

OTHER VEGETATION.

Grass on the drier sites is very scanty; but in the poplar country it is luxuriant, and grows mingled with a wild pea-vine. The muskegs provide some wild hay, and the sloughs are full of a long reed, which is also cut for hay by the settlers. Blueberries are abundant in the sand country, and are gathered for the market by Indians and others.

The sphagnum of the muskegs could probably be manufactured into peat fuel, when the cordwood supply has been reduced somewhat.

FIRES.

Fire, the foe of the forest, has been unable in this region to replace it by prairie, or even, apparently, to stay its advance on the grassland, yet it inflicts enormous loss on the encroaching timber. It would seem that the 'climax forest' on the clay soil is a white spruce type, and the same may even be true of the sand ridges, yet vast areas are repeatedly fire-swept before the jackpine and aspen, the 'forlorn hope' of the forest, have passed the thicket stage. The fires are promptly followed by a vigorous young growth of trees, not, as in Southern Alberta, by a park-like formation, gradually changing to prairie.

There is usually just enough grass on the jackpine land to carry fire, but the young thickets and the recent slash are most exposed to it. The latter, indeed, is not much injured, but may carry fire to the former.

The trails in the sand-hills cannot be crossed by ground-fires, if watched; crown-fires, of course, are another matter. Back-firing from a trail or prepared line in an open part of the stand is probably the best method of dealing with them.

On the poplar land, ground-fires are difficult to check, on account of the thick growth of grass and pea-vine. The reeds on the sloughs deprive them of value as lines of resistance; and even the muskegs, if partly dry, may become a shelter rather than a barrier to the enemy.

FISH AND GAME.

The Saskatchewan river once abounded in fish, but their numbers have been greatly reduced of late years. The Shell and Little Red rivers have been spoiled by log-driving. Whitefish and suckers may be had on some of the smaller inland water-courses, but there is nothing in the locality examined to attract either the commercial fisherman or the angler from any distance.

Game, on the other hand, is still abundant. The sloughs swarm with ducks, the timber with grouse; wild geese sometimes halt in the neighbourhood, and rabbits are plentiful throughout the district. Of larger game, moose and jumping deer were seen within a few miles of Prince Albert, and a few elk north of Fort à la Corne. Coyotes approach to the very edge of the town, and engage the dogs in vocal competition. Tracks of bears and timber wolves were seen in the remoter parts.

The moose, deer and elk naturally prefer the fertile poplar country, but as this is now being cleared and settled the animals take refuge in the jackpine sand-hills.

ROADS.

A few good highways, generally keeping close to the old Indian trails, have been constructed, but the majority of the trails are fit for use only in winter. Summer travel, except along the main roads, is decidedly difficult, even on foot. A system of passable trails for patrol purposes is a present necessity, and will greatly increase the usefulness of the rangers.

AGRICULTURE.

The clay-loam soil is the best in the district, and mixed farming is a thriving industry. As already mentioned, the country is hardly adapted for mere grain-growing. The sloughs, when drained, give good hay and grain crops. The cost of draining varies greatly, but steady progress is being made, and every ditch affects a considerable area. In many places, drainage would be a profitable public enterprise.

The sand country is naturally unattractive to the farmer, yet where it approaches the town it is sometimes homesteaded. Excellent potatoes can be grown, and stable manure thrown away in Prince Albert might be used here to advantage; with its use, the cultivation of grain, small fruits, and hardy vegetables might well be possible.

The muskeg type is regarded by the farmers as irreclaimable, even if drained. Bog hay is its only agricultural product.

STOCK-RAISING.

The region is unsuitable for horses; neither the bog hay nor the slough water agrees with them, although cattle thrive on both. Oxen, despite the strong prejudice against them, are replacing horses on many farms. Though painfully slow on the road, they are excellent for the heavy work of breaking and plowing. A few sheep are kept on some of the farms, and seem to do well. The slough country supports domestic ducks as well as wild ones, and chicken farming is the main reliance of the settlers in the sand belt.

HOMESTEADERS.

The eastern block of the proposed extension of the Nisbet reserve is cut off from the main body by a number of scattered homesteaders; some of them had abandoned their entries after cutting off the cordwood, and others had not started to improve, but a few had made substantial improvements and were producing potatoes and poultry.

The northern block of the proposed extension is similarly cut off by homesteaders, who in this case have located along a narrow strip of good clay country between two sand areas. Their farms may be productive but are somewhat isolated from neighbours. Had the lands been vacant they might well have been included in the reserve.

There is also an isolated patentee in the heart of the northern block. His farm, close to the Shell river, is very productive, and it will probably be unnecessary to remove him.

CORDWOOD LICENSES.

A Prince Albert cordwood firm has covered much of the jackpine land with its license, thereby protecting it from homesteaders, and the head of the firm has been active in demanding the reservation of the tract for forest purposes. The license also covers some poplar land, fit for homestead when cleared, and exposed to much danger from fire in the meanwhile. For these reasons, the outlying poplar lands, not included in the forest reserve, should be cut over as soon as they can be made accessible.

When the reserve is established, the license will naturally be allowed to run its course. The market conditions, as well as the natural conditions, favour a tie-and-cordwood management, cutting to about ten inches, and thinning for cordwood in the younger thickets. In future, the demand for saw-timber is bound to increase, and therefore steps should be taken now to plant at least the better sites with desirable species, such as white spruce and, possibly, Scots and red pine. The jackpine may be clear-cut, for the cones on the ground will germinate when the trees are removed.

FIRE PROTECTION.

Trails for patrol purposes should be constructed through all parts of the reserve; a good deal of floating corduroy will be necessary. In the drier parts the trails, if travelled to any extent, would serve in some measure as fire-guards, or at least as lines from which to back-fire. In addition to a diligent patrol, local co-operation in fire-fighting can and should be secured.

South of the river there will be one ranger at Macdowall and one to the north of the Pines. If the extensions are adopted. two rangers on the north will be necessary, of whom one could be placed at the east end of the present Nisbet reserve, and one a few miles west of the third meridian. If the appropriation will permit the employment of only one ranger, he should be located near the west end of the Waspaton Indian reserve. In addition, the Canadian Northern Railway Company should be required to patrol its lines.

Owing to the close proximity to civilization, telephone lines in the reserves could have town and country connections, and would be highly serviceable. Lookout towers, with telephones, would also be of great value.

Respectfully submitted,

E. G. McDOUGALL,
Forest Assistant.

No. 27.

REPORT OF W. J. VANDUSEN.

Toronto, November 9, 1911.

R. H. Campbell, Esq.,
Director of Forestry,
Ottawa, Ont.

Sir,—I beg to submit the following report, with accompanying maps, on the work which I have carried on during the summer of 1911 on the Porcupine mountains in Manitoba.

According to your instructions I reported to Mr. J. R. Dickson, in Swan River, Man., on May 17 last, and proceeded to the purchasing of an outfit and supplies for the party. I was joined by the other members of the party—Messrs. C. P. McAlister, H. B. Murray and Donald Greig—on May 24, and, having secured a cook and packer, the party was ready to proceed to the field on the 25th, but was prevented from doing so by the weather. It rained on the 25th and 26th, and on the 27th two inches of snow fell. This rain and snow, while delaying us, were exceedingly beneficial, inasmuch as they proved a very effectual stop to the forest fires which had been burning for some time in the region. The following day (Sunday) being fine, we were able to make a start on Monday, and, although the roads and trails were in very bad condition we arrived at Cross lake on the afternoon of May 31.

NATURE OF SEASON.

The first part of the summer (June and July) was very wet. As a result, progress was slow, and the continual wet was hard both on the equipment and on the health and spirits of the party. During August and September we had less rain, more than half of the number of days being without rain. On quite a number of days it was difficult to do much satisfactory work on account of the heavy wind hindering tree-top observation to a considerable extent. According to natives, the season was one of the worst experienced for mosquitoes, it being almost impossible to run a compass or take notes on some days. The mosquito pest lasted from our arrival until about the middle of August. Few of the days were hot and all the nights were cool.

NATURE OF THE WORK.

The work took the form of a reconnaissance survey, with the object always in view of determining a new boundary to the present Porcupine forest reserve which would include all land unsuitable for agriculture. It soon became evident that it was impossible to get a comprehensive knowledge of the area in the time at our disposal by merely running lines on the ground, as the hazel and mountain maple undergrowth made distance observation impossible. We, therefore, relied on observation from tree-tops to a great extent throughout the season.

The work was carried on by two parties, each composed of two men. In running compass lines a party made on an average about four miles a day, having, of course, to return the four miles or more to camp. We took advantage of all wagon and pack trails, and even moose trails helped along the work. In traversing the trails a party could make about four and a half miles a day.

ROUTE FOLLOWED.

Our first working camp was located on Cross lake in section 31, township 38, range 28, west of the first meridian. From there we went to Whitefish lake and thence along the southern boundary of the reserve to Woody river. We then moved to section 7, township 38, range 28, and from there by a series of camps in a northeasterly direction, striking the railway at Birch River Siding. From Birch River Siding to Barrows Junction we had a camp at each station and worked from the railway by means of velocipedes. This proved to be a very rapid method, and Barrows Junction was reached on August 23. At this point we left the railway and moved in a general southwesterly direction, meeting the northern boundary of the reserve at the northeast corner of township 42, range 31, west of the first meridian.

My three student assistants left for college on September 13. On September 16, the packer, cook and myself left Bowsman to go up the western boundary of the reserve. On reaching the southwest corner of the reserve we found a winter road, instead of a summer road as expected, and as we had provisioned for a rapid trip were unable to go more than six miles north. From this point, however, I could see for at least ten miles north, and found that the country is all gently rolling. I would recommend that a summer road be cut up this western boundary, and when this is done a closer examination of the area immediately to the west should be made with the view of reserving it if necessary to protect the head-waters of the Swan river.

During the season we had twenty-five main camps and numerous sub-camps, and traversed approximately eighty miles of trails.

TOPOGRAPHY.

Most of the rough area known as the Porcupine Mountains is found in the province of Manitoba. The level area to the west rises gently and gradually until within about six miles of the Manitoba boundary, where it breaks into rough hilly country. From here eastward to within two or three miles of the Canadian Northern Railway, for two townships on either side of the eleventh base line, the country is rough and hilly. The falling off of the mountains on the north and south becomes more and more marked on moving eastward. The eastern edge of the mountains is very rough, falling off to the railway quite abruptly. The Canadian Northern Railway from the eleventh base line to Powell Siding skirts along the edge of the rough country, avoiding as much as possible the large muskeg which extends eastward to Swan lake and Dawson bay. On the first plateau the country is for the most part gently rolling, with a large percentage of black spruce muskeg with jackpine and poplar ridges.

Only two lakes of any size were met with during the season, namely, Whitefish lake and Cross lake. Good water was always available in the numerous streams, many of which are fed by springs. Of all the streams only seven deserved the name of river; these were the Woody, Bowsman, Birch, Bell, Steeprock. Rice and Armit rivers.

A number of the smaller streams showed strong indications of the presence of iron. Again, many sulphur and salt springs were met with, which seem to indicate the breaking down of iron compounds in the hills.

SOIL.

The hills, in the main, are clay, no bed-rock being seen in any of the hills or cutbanks. On the south the subsoil is clay, with usually a good covering of loam and humus, but occasionally boulders are quite numerous. From the correction line north along the proposed boundary the soil becomes very sandy, with gravel in places, until Barrows Junction is reached, where it changes again to clay.

In the muskeg, as a general rule, black muck was found down as far as the water-table, which varied from two inches to two feet below the surface.

TREE GROWTH.

The principal trees found on the Porcupine Mountains are:—

Picea canadensis (Mill. B.S.P.). White Spruce.
Populus tremuloides (Michx.). Aspen (White) Poplar.
Populus balsamifera (Linn.). Balsam (Black) Poplar.
Betula alba, var. *papyrifera* (Marsh., Spach.). White Birch.
Picea mariana (B.S.P.). Black Spruce.
Pinus Banksiana (Lamb). Jackpine.
Larix laricina (Michx.). Tamarack.

Of these trees white spruce is the only commercially important one at the present time, and that of a commercial size is to be found in the timber berths scattered along the lower slopes. On the uncut limits the white spruce would average between one and a half and two million board feet per square mile. The growth of white spruce in this region is shown by the following table:—

Age.	Diameter at Breast-height.	Height.	Volume.
Years.	Inches.	Feet.	Board Feet. (Doyle Rule.)
10	1·1	6	...
20	2·4	12	...
30	4·0	20	...
40	5·0	28	...
50	7·2	36	16
60	9·1	46	30
70	10·7	53	50
80	12·0	62	60
90	13·0	67	80
100	14·0	71	100
110	14·8	75	130
120	15·7	80	160
130	16·3	82	190
140	17·0	84	220
150	17·7	86	255
160	18·0	..	300
170	18·2	..	333
180	18·4	..	365

This table is based on 26 trees on site 1, showing best development therefor.

This species is rarely found in pure stand, invariably being accompanied by poplar or birch in varying quantities. It is the timber tree of the region, very little else being cut by the lumbermen.

There are large quantities of mature poplar, both aspen (white) and balsam (black), in both pure and mixed stands. A large percentage of the aspen is defective, mostly at the heart; the balsam poplar appears to be in a very healthy condition, but the wood of both these poplars warps and checks so badly in the seasoning that as yet they have not been marketable. There is very little demand for fuel-wood in Swan Valley. If possible, some method should be devised for the utilization of this supply of poplar which is ready for the axe.

Black spruce is confined mainly to the muskeg and semi-muskeg, and its growth is very slow.

Tamarack is also largely found in the semi-muskeg. It borders the muskeg in many places, and in all cases appears to be in a very healthy condition, no evidence of its fatal enemy, the larch saw-fly, being noticed. I might also add that both white spruce and tamarack were prolific seed-producers this year.

White birch is found on the south, scattered with the poplar, but on the north there is more birch than poplar. The trees are too crooked for lumber, but would make excellent fuel.

Very little mature jackpine remains, nearly all having been cut for ties.

After going up the first rise of the mountain in most cases one meets young growth of poplar or jackpine about twenty to twenty-five years old. These two species come in first after a fire, but in many places the white spruce is coming in under the poplar which will eventually be displaced by the more persistent spruce. Above this first rise this fire-muskeg type would constitute from eighty per cent to ninety per cent of the area. I venture to say that there is practically no merchantable timber on the present Porcupine Reserve.

The following percentages of areas will give an idea of the condition of the area proposed as an addition to the present reserve:—

	Percentage.
Spruce timber, with mixture of poplar and birch..	7·7
Poplar and birch..	7·1
Poles (not in muskeg)..	5·0
Burn, restocked..	43·3
New burn, without regeneration as yet..	11·0
Muskeg, mostly black spruce and tamarack poles..	25·9

THE BOUNDARY PROPOSED.

In locating the new boundary I have been guided by three factors:—

1. Topography.
2. Soil.
3. Tree growth.

The boundary proposed, as shown by full yellow line on accompanying maps, is approximately 106 miles in length, adding 428½ square miles to the reserve as at present outlined. This area is of no agricultural use. Lying next to the boundary of the present reserve is a gently rolling area composed of muskeg, with some fifty to sixty per cent sandy, gravelly or stony ridges. These ridges are covered with jackpine and poplar twenty to twenty-five years old. Next to this is an area of rough, rolling country, part of it bearing good timber and part of it fire-swept. The boundary on the north and south skirts the edge of this rough, rolling area, but from this rough area to the proposed boundary on the east there is a very sandy strip from one to two miles wide.

North and south of the present reserve, immediately east of the second meridian, are two areas, 'A' and 'B,' inclosed by a broken yellow line, which I would also recommend to be added to the reserve.

The area on the north ('A') slopes gradually to the northwest and has a loamy clay soil. A considerable portion of the area carries mature poplar, with scattering white spruce. Spruce poles also cover a considerable area and there are found a certain amount of muskeg and jackpine ridges.

The area on the south ('B') slopes gradually to the south and the soil is, in the main, clay loam. Just east of the second meridian a large muskeg extends east about six miles. The ridges are covered with jackpine and poplar about twenty-five years old. The remainder of this area is mostly covered with mature white spruce and poplar.

I do not think there is any likelihood of either of these areas being put to agricultural use in the next fifty years, and, therefore. they should be included in the forest reserve, as, in that condition, they can be better administered for the benefit of the surrounding country.

Again, it will be noticed that the eastern boundary keeps close to the railway, without crossing it, however. East of the railway there is a large area ('C') fit only for growing trees. This area east of the railway, over as far as Lake Winnipegosis, is practically level, the only break being southeast of the south end of Swan lake, where a low range of hills, known as the Kettle Hills, runs northeast and southwest. From interviews with a number of the oldest Indians who have roamed over this section of the country for the last four or five decades, it appears to be mainly muskeg. The numerous streams crossing the railway and flowing east are lost in the muskeg, only the larger rivers retaining any semblance of a course. Around Swan lake, along Shoal river, on the shores of Dawson bay and Pelican bay and on the east shore of Lake Winnipegosis down to Duck bay there is a strip of dry land varying in width from half a mile to three miles. The remainder is muskeg, with about 25 per cent sandy ridges. The ridges are stocked for the most part with twenty-five year-old jackpine, poplar and spruce. The growth in the muskeg is confined to black spruce and tamarack, which rarely exceeds six inches in diameter. From the mouth of the Woody river south for some distance past the Swan river there is a considerable area of good hay-land.

Practically the only use to which this area can be put is the growing of trees. A market for its product can be reached by both rail and water, and on account of its peculiar position the fire danger can be reduced to a minimum. I would, therefore, suggest that a boundary be located between Birch river on the railway and Lake Winnipegosis, and that the area north of it, to Dawson bay, Red Deer river and Red Deer lake be put into a forest reserve.

FIRE PROTECTION.

Fire has done great damage to the growth on the Porcupine mountains. About twenty-five years ago immense fires must have raged, which left only a small portion of the timber standing. Over this burnt area jackpine and poplar soon made their appearance, the spruce coming in a little later under the shelter of the poplar. In some cases, being burnt a second and a third time, the soil is robbed of the vegetable covering which took ages to accumulate, and the result is a treeless area. The most recent fire was that of this spring, when approximately 150 square miles were burned over, part of this area being young growth of poplar and jackpine twenty to twenty-five years old, and part mature spruce and poplar. This fire was stopped by the heavy rains and snowstorm of May 25 to 29. Only three months after the fire evidences of the spruce wood-borer were noticed in this standing burnt spruce.

There are four danger points to watch in trying to prevent fires, viz., the railway, the sawmill, the settler and the camp fire; and the greatest of these appears to be the railway. To secure adequate fire protection on the Porcupine Reserve I would recommend that there be two fire-rangers, and that they live either on the reserve or very close to it. Each should become thoroughly acquainted with all the trails and roads in his district and see that they are kept in proper condition, especially during the summer. Trails and roads should be cleared before the freeze-up, for when a trail is cut in midwinter—the easiest route (over muskeg and lake) being, of course, selected—it is usually worse than useless during the summer, the time of fires. Lookout points commanding endangered territory could be very easily located. During the dry season I would recommend a daily patrol, at least, of the railway on velocipedes, and the rangers should have absolute authority as to the time and place of burning replaced ties on the right of way. Then, again, outlying settlers should be visited at least once a year and cautioned as to the proper use of fire and their liability in the case of its spreading from their land.

FISH AND GAME.

In Cross lake we found the jack-fish, and in Whitefish lake, jack-fish and pickerel.

Moose were very plentiful. The sulphur and salt springs, of which there were a considerable number on the slopes, were much visited by them, and in most instances well beaten trails radiated from them like the spokes of a wheel. Then there were the black bear, timber wolf, fox, deer, beaver, otter, lynx and mink. This forest reserve should become one of our best game reserves.

Respectfully submitted,

W. J. VANDUSEN,
Forest Assistant.

No. 28.

REPORT OF FRANK M. BEARD.

Department of the Interior,
Forestry Branch,
Ottawa, September 15, 1911.

R. H. Campbell, Esq.,
Director of Forestry,
Ottawa.

Sir,—I have the honour to submit the following report and map to accompany, covering the work done during the season of 1911 by the Hudson Bay Survey party of the Dominion Forestry Branch.

As instructed by you I left Selkirk June 24, 1911, via *S.S. Wolverine,* accompanied by two men, arriving at Warren's Landing on June 26 and at Norway House the same day. As the canoe I brought up with me was not serviceable on the lakes that we would encounter I traded with the Hudson's Bay Company at this post for a larger one. Mr. Blackford, fire ranger at this post, kindly furnished us with two men as guides to Cross lake.

We left Norway House June 27 and travelling by the East Branch of the Nelson river, reached Cross lake July 2. Procuring a guide at this post we left July 3 for Split lake, arriving at this post July 7.

One of the men who came down with us to this post returned to Norway House, complaining of being too ill to travel farther. Here, as instructed, Mr. H. B. Blount was waiting with the supplies, a cook and two canoemen. According to your instructions I interviewed Mr. J. T. Whyte (now deceased), who was stationed at this post as fire-ranger, regarding the timber inspection accomplished by him the previous summer. I was informed that he had inspected the territory from the Manitou Rapids to Buttneau lake, a distance of about seventy miles by railway line, and that his reports and maps had been sent into the Department and accepted.

After some difficulty, we procured three Indian canoemen to assist us to York Factory. As we had planned to come back by the Hayes river it was necessary to take an extra canoe to the bay to insure the Split Lake Indians a return.

The party was made up of the following:—Mr. Wilkins, cook; M. Swanson and McLean, canoemen; Mr. H. B. Blount, four Indians and myself. With three canoes, we left Split lake on July 11, travelling by the Nelson river until we arrived at the mouth of the Buttneau river, going up this river into a small lake. We portaged over into the Kettle river and proceeded up to Kettle lake, as this was the point at which Mr. Whyte left off. We inspected the timber along the proposed route of the Hudson Bay railway to the Bay. Finding the timber of little commercial value, we were able to cover the territory in a much shorter time than we had anticipated. From Kettle lake we went down the Kettle river into the Nelson, and via Nelson river to Hudson Bay, inspecting the timber by running compass lines back to the railway line, where practicable. Where the railway line extended south of the river at its greatest distance and the area intervening was covered with deep muskegs, making it impsosible to traverse during the summer months, I interviewed members of the railway survey party who ran the line from the Bay to the Manitou Rapids, thus gathering information as to the timber conditions of this locality thirty miles along the proposed railway line below Angling river.

Arriving at York Factory on July 26, we repaired our canoes and after some difficulty procured a guide to take us through to Norway House. From York Factory we sent one canoe back to Split lake with three Indians.

The party, now made up of seven men, left York Factory July 27, travelling by the Hayes river into the Echemamish and Nelson rivers, respectively, arriving at Norway House August 21. On August 25 we proceeded to Warren's Landing on *S.S. Highlander,* and on the 27th left the Landing on *S.S. Wolverine,* arriving in Selkirk September 1, 1911, a distance of 1,000 miles covered by canoe from Norway House to Hudson Bay and return.

OBJECT OF THE SURVEY.

The main object of the survey was to make a reconnaissance of the country adjacent to the proposed route of the Hudson Bay railway between Buttneau lake and Hudson Bay. The reconnaissance was to consist of locating and estimating merchantable timber to be used as ties for the construction of the proposed railway found within a distance of eight to ten miles of the railway line, excepting on rivers where such timber would be available to the line by driving. Where the timber was not merchantable it was inspected simply by noting the species and the forest conditions.

The methods best adapted for fire protection were carefully noted.

METHODS USED.

From points along the river course, at intervals of eight to twelve miles, compass lines were run back to the line of railway when possible and tied on to that line. The water-courses were also used in locating types. From advantageous points, such as heights of land and the tops of trees, field-glasses were used to good advantage in examining and locating the forest types. Trees under eight inches in diameter at breast height were considered unmerchantable. Territory not commercially timbered, *i.e.*, producing trees under eight inches in diameter at breast height, was inspected, giving a description of species, type and prevailing conditions.

WEATHER CONDITIONS.

Information gathered from the inhabitants of the country shows that we passed through an unusual season for this district. During the months of July and August, rain fell continuously and high winds from the northeast were constant most of the time. The temperature ranged from 40° to 50° F., thus making a very unsatisfactory climate for the production of merchantable timber. Frost occurred August 28.

GENERAL DESCRIPTION OF THE COUNTRY.

Topography.—The absolute elevation of Split lake is 470 feet above sea-level, giving a drop of 37·6 inches to the running mile between Split lake and Hudson Bay, a distance of 150 miles. The drop between Split lake and the mouth of the Limestone river (a tributary of the Nelson) is 420 feet, or 50·4 inches to the running mile for a distance of 100 miles. This shows that the drop in elevation between Split lake and the Limestone river is very abrupt, and below the Limestone river to Hudson Bay, the fall is very slight, having a drop of 50 feet in 50 miles.

The surface of the total area covered is undulating to nearly level. The territory surrounding Split lake is composed of areas of occasional granite rock outcrop worn down to the general level of the country by the glaciers of the glacial period. Below Split lake the country is practically level, with a slight northern exposure.

Drainage.—The divides between river courses are very low surrounding Split lake, it being not uncommon to find a muskeg situated on the divides. There is a moderate slope down toward the Bay and it occurs in east and west undulations, so that there is no drainage except by the Nelson river down to the Bay. There are some streams running into the sides of the river, but they, like the Nelson, cut deep with walled trenches, sometimes eighty feet high, as steep as boulder clay will stand, and that means an angle of sixty degrees for this height. After getting on top of these banks one will find the moss very deep and twenty feet back from the edge of the stream a muskeg will be discovered, indicating that the drainage is very poor. The country is covered by muskeg, but there are a few large lakes, a fact which shows that the drainage of the country is comparatively new.

DESCRIPTION OF FOREST COVERED.

Kettle River District.—The railway line comes into this section between Kettle and Buttneau lakes, following the Buttneau river a distance of eight miles, crossing the Kettle river about twelve miles from its mouth and then following this river on the south side in a northeasterly direction.

The territory surrounding Kettle lake and Buttneau lake has been burned off recently, leaving a most desolate-looking country. This continues on the north side of the river to the banks of the Nelson, and extends over nearly all the country between Kettle lake and the mouth of the Kettle river. On the south side of the river near the lake an old burn has ravaged the country, leaving a very poor growth. This converges into a pole-type to the northeast, and towards the mouth of the Kettle river the type changes to an old burn. A low ridge divides the drainage of the Buttneau and Kettle rivers. Along the top of this ridge jackpine predominates. On the slopes tamarack and black spruce are associated. Along the south of the river the slope is very gentle and extends back for several miles. Black spruce predominates, associated with a small per cent of tamarack.

The only merchantable timber in this district was found along the banks of the Kettle river, in small plots located on flats at the turns in the river.

There are 7,000 spruce ties of first and second grade, 6,000 first grade and enough timber of the 12-inch and 14-inch diameter-class necessary for the temporary bridge construction on the Kettle river.

This timber is accessible to the railway by the Kettle river. The best method of taking this out is to have it cut by the railway contractor when the road is put through. A small contractor would not take the contract for the following reasons:—

1st, because the timber is too scattered;

2nd, because the base of supplies is too far away, making the cost of transportation too great;

3rd, because the quantity of timber is too small to insure any profit.

Kettle River to Angling River.—This district is drained by a small creek, showing that the slope to the river is very gentle. The timber has been practically all burned off in former years. Some areas are now producing a stunted growth of spruce, running to the diameter of three to four inches. Most of the territory, especially back from the river two or three miles, is covered with muskeg. There are no large lakes in the district and this applies to the whole area to the Bay. A characteristic feature of the black spruce is that it attains its best growth along water-courses and lakes. This, then, is one reason why the forest cover does not reach merchantable size.

Angling River.—This river is well named, being very crooked. Its banks are forty to fifty feet high, consisting of a green clay. Along the flats of the stream caused by the wash of high water the spruce growth reaches the diameter of 8 in. to 12 in. at breast-height, and is estimated at 4,500 ties. The timber growing back from the stream is of a spindly growth.

The cutting of these ties would not be profitable to either a railway contractor or a sub-contractor for the following reasons:—

1st, because supplies could be transported only on ice, making the cost too great, Angling river being not navigable;

2nd, because the stream is not suitable for transport of ties to place of construction;

3rd, because the quantity of timber is too limited.

Angling River to Hudson Bay.—The only merchantable timber found in this district is situated in small scattered plots along the banks of the Nelson river, and is estimated at 1,400 ties. The timber found in this district would be available by booming and floating it down the Nelson river to its mouth, but being so limited in quantity it would hardly pay to handle the proposition.

The railway line runs adjacent to the river in a northeast direction to Hudson Bay and is located from ten to fifteen miles south of the river.

The territory immediately below the Angling river is covered by a dense growth of black spruce running in the diameter class of four to six inches, the large trees being found along the stream. This pole type extends as far as our line traversed, six to eight miles, and continues down the stream for fifteen to twenty miles, running into an old burn. This area has been restocked by a sickly growth of black spruce and tamarack, the tamarack being found in mixture with spruce on the semi-muskeg areas. Farther down towards Hudson Bay this type merges into a pole stand, consisting almost entirely of black spruce everywhere, including the muskeg situations. This type compares favourably with an alpine type such as is found at high altitudes. On high peaks the conditions for tree growth become unfavourable since the extreme winter temperature above the snow cover and frosts nearly every month in the year can be endured only by the hardiest of species. The wet soil of this sub-arctic region, frozen most of the year, or the thin soil of the alpine peaks, produces trees stunted in form, with small diameters. This type continues to the water-line on Beacon Point.

The area along Hudson Bay, being very low, was covered with water during the past summer.

SUMMARY OF TIMBER.

Kettle river	6,000	ties.
Angling river	4,500	"
Nelson river	1,400	"
Total	11,900	"

This shows that ties for this section of the proposed railway will have to be imported.

GENERAL CONDITION OF FOREST.

Forest canopy.—Black spruce predominates, associated with tamarack and semi-muskeg areas. Aspen and jackpine occur in mixture with the spruce on ridges and along water-courses.

Black spruce is primarily a swamp tree, and is a common inhabitant of cold, poorly drained muskegs, a typical tree for this country. It occurs in pure, dense stands producing trees small in diameter and stunted in growth.

Jackpine and aspen occur on very limited areas and in small quantities in this locality. The type disappears entirely 100 miles from Hudson Bay.

Forest cover.—Alder forms the principal undergrowth in spruce types in restricted areas. Black willow is found under spruce on well drained plots along river-courses.

Forest floor.—Labrador tea is distributed over the whole area, growing in dense formation with moss, making an ideal situation for fires in a dry season and for muskegs in a wet season.

Density.—In the spruce and tamarack types the density averages six.

Density deals with the number of trees found on a given area. The greater the number growing on an area, the more intense will be the competition for the chief factors necessary to growth, which are soil and light in this locality.

The dominating forest canopy, as stated before, consists of spruce and is practically all composed of the same age classes, owing to the repeated fires.

Naturally under these conditions the competition will be very keen, as the demands on light and soil will be the same. The spruce, being lateral rooted trees, have not only to compete among themselves for the nourishment to sustain life, but they must also compete with the annuals for these factors.

The competition among themselves which is very strong, owing to the density of tree growth combined with the competing annual plants and the limited amount of plant food in a muskeg situation, explains to a great extent the small, spindly growth in this locality.

Density in a stand has the tendency to direct the trees' growth upward towards the light, clearing the boles of side branches and producing long straight trunks, finally crowding the weaker species out and dividing the forest into two classes, the dominant and the dominated. This theory applies very well when the soil conditions are favourable for the maintenance of this increased height-growth.

But the black spruce is a very tolerant species, the boles do not clear themselves readily, and the trees grow slowly, by reason of the adverse soil and weather conditions. Thus we find that after 100 years growth the development of the stand is about equal, as there is no division into dominant and dominated classes, consequently the trees are stunted in height, running to a small diameter and bushy in form.

Reproduction.—After a fire reproduction takes place very slowly on account of the thickness of the moss and the repeated ground-fires.

There are no pioneer species, such as the poplar and birch, to restock an area after a fire, as do these species in most localities to the south of Hudson Bay. The black spruce does not bear seed abundantly, although it usually bears some seed every year. Years of especially abundant seed-production are at long, irregular intervals, and for this reason the ground is left barren for many years after a fire, as the spruce must establish itself on the denuded areas.

Rate of growth.—The rate of growth is very slow on account of suppression or unfavourable conditions. Spruce will, however, produce a fair-sized tree when conditions of soil, moisture and light are favourable.

I made a stem analysis of black spruce on two different locations. The first analysis was made on a well drained area along the Kettle river, where the soil was porous. Trees 5 in. to 6 in. in diameter and 40 to 50 ft. high were found to be 110 years old.

The second analysis of spruce was taken in a swampy locality where the soil was non-porous. Trees 3 in. to 4 in. in diameter and 20 to 30 ft. high were found to be 100 years old. This shows that under favourable conditions the black spruce will grow to fair dimensions. The rate of growth for the other species was not taken, as they formed a very small percentage of the stand.

Soil.—The subsoil of this area resembles very much the clay found in Ontario.

To get a fair idea of the soil I took borings in three situations. The first taken was on a low ridge situated near the Kettle river. Growing moss was six inches deep, moist; the decomposing moss ran to a depth of eight inches, and this merged into a wet sandy clay.

The second boring was made in a muskeg in the same area, the growing moss in this situation being eight inches deep, wet; the decomposed moss saturated with water averaged ten inches in depth, and this ran into a non-porous clay.

The third boring was made fifty miles from Hudson Bay in a muskeg, being a typical situation for this region. The growing moss averaged ten inches in depth, wet; decomposing moss averaging eleven inches in depth, saturated with water, the subsoil being composed of a non-porous clay.

Ice was discovered in several localities, occurring generally in deep, cold moss situations within a range of fifty miles of Hudson Bay.

To produce a habitat favourable for tree growth, the muskegs would need to be drained of the stagnant water found in such situations and the deep layers of moss should be burned off, making a mineral soil available for the germination of seeds. The area of muskegs covers thousands of square miles making it a project of great magnitude to drain such areas.

Climatic Conditions of Forest.—Spruce growth may suffer severe damage, as was shown in the season of 1910-11. Owing to sudden changes in the weather conditions peculiar to this locality, considerable areas of spruce trees were killed in the territory examined. The explanation seems to be that the trouble is due to climatic conditions. A sudden cold spell froze the moss and upon this fell a heavy snow. Following this a warm period started activity in the tops of the trees, but as they could not draw up moisture from the ground to supply the transpiration, the needles dried up and the trees were killed.

FOREST PRODUCTS.

Cordwood.—The forest covers thousands of acres in this locality, in fact the whole country from Hudson Bay to the timber line in the Arctic region is forested, except where the ground has been stripped of vegetation by the periodic fires. The possible supply of cordwood is enormous, but on account of its remoteness from settlement it has little commercial value.

Fence posts.—A good percentage of the timbered areas should produce durable fence-posts. The trees grow very slowly, and the wood is composed almost entirely of summer growth. There are two separate periods of annual growth, spring and summer. The wood formed in the forepart of the season is light in weight and soft in texture. The outer darker part is termed the summer-wood of the ring. The latter is very hard and firm, and determines the weight and durability of the wood.

Pulpwood.—The black spruce, as stated before, is a very tolerant species, so that it does not clear itself well of side branches, and every branch on the trunk means a knot in the wood. This, combined with the hard wood produced by the greater proportion of summer growth of the spruce, makes undesirable material for pulpwood. The trees growing on the well drained flats along the streams should make good pulpwood, but as this area forms a very small percentage of the stand, the forest cover of the country could not be classed as a pulpwood type.

CONCLUSIONS ON THE TIMBER CONDITIONS.

1. *Why the forest does not produce merchantable timber.*—The climatic conditions are adverse to the production of merchantable timber.

2. The soil and muskeg situations are not adapted to the production of timber.

3. The density of tree growth is too great for the amount of nourishment.

4. The repeated fires will not permit the establishment of a forest cover.

Uses of forest cover.—The forest cover is adapted to the protection of the watershed of the Nelson river.

The forest cover is fitted for the protection of fur-bearing animals and game.

Problem of forestry.—The problem is to drain the area so that black spruce will have favourable conditions to produce merchantable timber.

FIRES.

The conditions found in this district may be described thus:—

It is a region practically uninhabited, the only means of transportation being the water-courses, as there are no trails or roads. The only means of communication is by York boats transporting supplies from Norway House to the outposts of the Hudson's Bay company.

During the summer months the Indians bring their families in from the hunting grounds and gather in bands around the Hudson's Bay company's posts. At these times there are about 350 Indians at Split lake and 300 at York Factory.

The Nelson river route between Split lake and Hudson Bay is used very little, as there was only one other party, besides ours, over the route during the season of 1911. This is accounted for by the great danger to life in shooting the continuous chain of rapids in a river as large and treacherous as the Nelson. This country is travelled over by Indian trappers in the winter, when it is impossible to set fires. We found the north side of the Nelson river burned over to a greater extent than was the south side. The canoe route on this river follows the north shore most of the way, so that it may be assumed that all the fires started along this route at camping places and on portages were caused by the carelessness of man. When the fact is taken into account that this has been going on for scores of years and the fires are left to burn themselves out, it causes little surprise to find an absence of merchantable timber along the banks of this stream.

Another important factor in starting fires, especially on the south side of the river, where there is practically no traffic during the summer months, is the frequency of electric storms, as in several instances we saw trees that had been struck by lightning in former years and had been the cause of several large fires.

The spruce forests are peculiarly liable to danger of fire in dry seasons. The trees are all small, composed of coniferous species and growing in dense stands, making a combination readily subject to fire. The lower half of every tree is easily inflammable, being covered with dry twigs and moss.

The lateral roots of spruce trees form a poor foundation for the support of the tree in deep moss situations. A fire sweeping through a stand of black spruce, if not completely destroying it, burns the moss away from the roots, leaving the trees unsupported, and kills the individuals by scorching the foliage and injuring the cambium, thus making an ideal condition for wind-falls, especially in this district where the uniform topography leaves free access to the sweeping wind-storms from Hudson Bay.

Protection.—Over large areas of muskeg the rate of growth is very slow and the present forest cover has little value commercially, but the forest cover should be protected, when practicable, to preserve the present stand for the protection of game and fur-bearing animals. The watershed of the Nelson river should be protected by keeping the forest cover established.

There are several difficulties in protecting this region under the present conditions:—

1st. As there are no trails or roads, the country back from the streams cannot be patrolled economically.

2nd. The canoe route between Split lake and Hudson Bay is not safe to travel over, especially by an inexperienced canoeman.

3rd. A ranger would be of little use in a huge, wild, uninhabited area of this kind with no assistance in fighting fires.

Fire is an extremely unnecessary evil and can be prevented by the exercise of care and judgment during the season of danger. The best preventive of fire is watchfulness on the part of all who travel in the forest to see that fires do not start.

If the fire-ranger at Split lake will impress this upon all travellers using the Nelson route below Split lake, I believe it will insure as valuable a protection as is possible under the prevailing conditions.

When the railway construction takes place the territory should be divided up into districts and a patrolman should be placed in each district.

Fire notices written in English and Cree were placed by our party on all portages and camping places.

FOREST ENEMIES.

1. Fire is the greatest destructive agent in this country at the present time, as there is no economical means of protection.

2. The high water carrying the ice out in the spring does great damage to the only merchantable timber in the country, which is always found along the well drained banks of the streams.

3. Adverse climatic conditions are detrimental to tree growth. No bug-killed timber was found in this district. This is probably accounted for by the shortness of the season, which does not allow the development of the life stages of insects.

It is interesting to note that the larch saw-fly was discovered at a distance of 200 miles above Hudson Bay on the Hayes river, being well established in this district and doing considerable damage.

CLIMATE AND NATURAL PRODUCTS.

Potatoes, radishes, lettuce and onions were grown at Split lake, but they were of a very poor quality, as sufficient cultivation was lacking to produce a thrifty growth and the weather conditions were adverse to the production of a good crop.

There is little doubt but that under proper cultivation, vegetables may become a profitable product. Although the growing season is short, covering a period of three to four months and a half, the days are long and the sun is very warm, rain being very plentiful—too much so, in fact, during this season for plant growth—but I understand that dry seasons are not uncommon, and, furthermore, the fact that fires have burned large areas of the country would bear out this statement.

The Hudson's Bay company's factor at York Factory told me that he had tried to grow vegetables but the experiment proved to be a failure. As far as I know, no grain has been grown in this locality.

The effect of the large body of water in Hudson Bay on the temperature, summer and winter, of the surrounding country is to make it much less extreme, rendering the summers colder and the winters milder. The climate around the Bay is foggy, giving the sun little chance of being valuable to plant growth. The mean temperature of the summer within 100 miles of the Bay will not be as high as it is farther back from it.

NATURAL RESOURCES.

Economic deposits.—From such observations as could be made, we found traces of copper, iron and mica. The rock formation from Split lake to the Limestone river is granite; below this point to the Bay the formation changes to limestone.

When the railway comes in there is no doubt but that the quarrying of granite for building purposes on the plains will be a paying industry.

Water-power.—From Split lake to the limit of the tide, a distance of about 140 miles by the river, there is a drop of 470 feet. The velocity of the water through the rapids is on an average seven miles per hour, the rapids being distributed evenly between Split lake and Limestone river. The bed of the river is a solid granite formation and the banks are from 20 to 80 feet high between these points, making ideal projects for producing power for manufacturing, such as pulp-mills, grist-mills, &c.

Game and fish.—Much of the area inspected is well adapted for the production of large game, such as deer, moose and cariboo, and will undoubtedly become a paradise for the sportsman.

Fur-bearing animals, such as mink, otter, fisher and muskrat, are very plentiful. Several seal were seen along the shores of Hudson Bay, and white whale was seen in great numbers.

The whale-fishing industry may be developed when the railway is built.

Fisheries.—The fish found in the rivers and lakes are sturgeon, trout, pickerel, jack-fish, suckers and whitefish.

SPECIES OF TREES.

1. *Picea mariana* (Black spruce).
2. *Larix americana* (Tamarack).
3. *Pinus Banksiana* (Jackpine).
4. *Populus tremuloides* (Aspen).
5. *Salix lucida* (Willow).
6. *Alnus tenuifolia* (Alder).

Respectfully submitted,

FRANK M. BEARD,
Forest Assistant.

No. 29.

REPORT OF J. W. CURRY.

DEPARTMENT OF THE INTERIOR,
FORESTRY BRANCH,
OTTAWA, April 1, 1911.

R. H. CAMPBELL, Esq.,
Director of Forestry,
Ottawa, Ont.

SIR,—Having received full instructions from you to make an examination of the timber suitable for pulp, on the Gull Rock lake and Trout lake watersheds, the Wenasaga river and other similar watersheds draining into Lac Seul, I beg to submit the following report:—

Leaving Ottawa on Tuesday, June 13, 1911, I travelled to Winnipeg, reaching there on the evening of the 14th, where I met Mr. Moodie, who was to assist in the work. Mr. Moodie and I were in Winnipeg until June 26 hiring men, purchasing supplies and awaiting canoes from Peterborough, Ont. We hired two cooks, but only two canoemen, as we thought it would be more satisfactory to wait until reaching Lac Seul where we could get some Indian canoemen, who would be able to act as guides in the country to be travelled.

Leaving Winnipeg on June 26, with Mr. Moodie, two cooks, and two canoemen, I reached Hudson in the evening. Here I was met by Mr. McLean, Indian Commissioner, who had hired four Indian canoemen for me, two being hired for the summer's work, the other two to help us as far as the Hudson's Bay Company's post on Lac Seul.

From Hudson I sent most of our supplies to Lac Seul post by the Hudson's Bay Company's steam tug, which plies between Lac Seul and Hudson station, on the Grand Trunk Pacific railway. This enabled us to move right in to Lac Seul without making more than one trip. With the canoes and the remainder of our supplies we started north, over the canoe route, to Lac Seul post, which is about twenty miles from Hudson.

Arriving at the post at ten o'clock, June 30, we made camp, after which we put our supplies in good shape and stored them in the Hudson's Bay Company's warehouse.

From here our work of exploration was to be commenced After obtaining as much information as possible regarding the country to be covered, from the Hudson's Bay Company's employes, we divided that section of the country east of Lac Seul post into two parts and proceeded to work it first.

COUNTRY EAST AND NORTHEAST OF LAC SEUL.

Starting east on Monday, July 3, we travelled together to within a few miles of the mouth of the Root river, which flows into the extreme northeast end of Lac Seul. Mr. Moodie went straight up the Root river to work it and its tributaries. With my party, I started up a small stream called Jackpine river, which flows into Lac Seul from the northwest, about five or six miles below the Root river. This river is eighteen or twenty miles long, and connects a chain of seven small lakes. There are nine rapids on it, with portages ranging from five to twelve chains in length; otherwise about two-thirds of it is a slow, deep and sluggish stream. From Round lake, which is a little over half-way up, to the mouth, it could easily be made driveable.

From the mouth of the river right to the head the timber has all been burned by a fire which swept through about twelve years ago, with the exception of a block of approximately six square miles, or 3,840 acres, which block is situated on the north side of Round lake. The block reaches north for about two miles, where it touches on Island lake (Island lake drains north). A burn of 1910 stretches north, east and west from here, the fire having run over part of the old burn on the upper part of Jackpine river. The timber on the above mentioned block averages 850 cubic feet per acre, making a total of 3,264,000 cubic feet. The stand consists of seventy per cent of jackpine, with average diameter of eight inches, twenty per cent of spruce with average diameter of seven inches, and ten per cent of poplar with average diameter of nine inches.

I had expected to make a portage across from the head of this river to another small stream, called Swan river, but the upper part of Jackpine river was too small for the canoes, so I was obliged to turn back. On the return trip my small canoe was swamped, a suit case containing maps, instruments, &c., being lost.

Swan river flows into Lac Seul about ten miles southwest of Jackpine river. The first twenty miles of it is about parallel to Jackpine river, above which it flows from the north and northeast. One-half mile from the mouth of the river is Spruce lake, about five miles long and from one-half to three-quarters of a mile in width. Part way up the river are two smaller lakes, and about twenty-five miles from the mouth is Swan lake, about eight miles in length and one mile in width. Two miles above Swan lake, again, is Goose lake, which is nearly two miles in length. The river above here comes from the northeast and north. Swan river is easily driveable from above Goose lake, but has its many faults, the upper part being thickly lined on either side with overhanging alders and other small trees; the water, moreover, is very deep close to the banks, which would make it very hard for working along the shores. The rapids also make the river hard to drive, while the lake expansions will make a greater expense than any of the other obstacles, there being practically no current in them. The only way of crossing would be to boom the timber across with sail-boats or other similar means.

On the north bank of Swan river from the mouth to Swan lake, there is a strip of timber averaging three-quarters of a mile in depth. It contains an approximate area of nineteen square miles, or 12,160 acres, on which the timber will average 800 cubic feet per acre, or approximately 9,728,000 cubic feet on the total area. The stand consists of seventy per cent jackpine, with average diameter of eight inches, fifteen per cent of spruce with average diameter of seven inches, ten per cent of poplar with average diameter of eight inches, and five per cent of white birch with average diameter of six inches. Back of this strip, toward Jackpine river the country is entirely muskeg and scrub until it reaches the burn as seen on Jackpine river.

On the south side of Swan river there is a similar strip of about twenty square miles, or 12,800 acres, containing, approximately, 10,000,000 cubic feet. The stand is the same as on the north side of the river. South of this strip the timber is of poorer quality and will average only about 500 cubic feet per acre. As this area runs nearly to the shores of Lac Seul it will be put in when the timber on the north shore of that lake is estimated.

One mile above Goose lake on the Swan river is a strip of very good timber. It is about four miles in length and half a mile in width, thus having an approximate area of 1,300 acres. The timber runs 750 cubic feet per acre, or 975,000 cubic feet in all. The stand consists of eighty per cent of jackpine with average diameter of eight inches, ten per cent of spruce with average diameter of seven inches and ten per cent of poplar with average diameter of eight inches.

This takes in all the timber in this section, as a fire during the summer of 1910, burned over an immense area. This fire, coming from the west, crossed Swan river just where it flows out of Swan lake, and ran east to Jackpine river and Island's lake.

(This lake empties into Swan river above Goose lake). To the north the country is burned as far as could be seen from the top of a high hill on the north side of Swan lake.

On the Root river there is no timber except four small blocks. Two of these are just west of the mouth of the river. One contains about 400 acres and runs 450 cubic feet per acre, making a total of 180,000 cubic feet, whilst the other contains 150 acres, the timber running 300 cubic feet per acre, or a total of 45,000 cubic feet. About sixteen miles above here is another block of about 220 acres running 450 cubic feet per acre, or a total of 99,000 cubic feet. Five miles above this, again, there is another block of about 160 acres on which the timber runs 500 cubic feet, or a total of 80,000 cubic feet.

All the other merchantable timber on this river and the Dog river, which flows into the Root river about six miles from its source, has been burned by fires which swept through the country about ten or twelve years ago and also during the summer of 1910. These fires are the same as those which burned around Swan lake, Jackpine river and far to the north.

For driving, the Root river would be much the same as Swan river, except that there are on it no lake expansions to speak of.

This completes the section of country east of Lac Seul post, except on the north shore of Lac Seul, which will be dealt with later. The total amount of timber found on this trip would be approximately, 24,371,000 cubic feet.

WENASAGA RIVER BASIN.

As it was impossible to get across the country from here, towards the Wenasaga river, it was necessary for both parties to return to Lac Seul post and proceed west from there. On the afternoon of July 16, I reached Lac Seul post, where I met Mr. Moodie, who had arrived a short time before me.

Upon our arrival at Lac Seul post we abandoned our two small canoes, as they were not large enough for the work such as crossing large lakes in stormy weather, running rapids, &c. To replace them I hired two larger ones from the manager of the Hudson's Bay Company's post at Lac Seul. This made it necessary to engage an extra canoeman for each party, two more Indians being hired.

Our outfit being too large to move to the west end of Lac Seul in one trip by canoe, I hired the Hudson's Bay Company's gasoline launch, which took us to the head of the English river on Saturday, July 22. I may say there was no time lost while waiting for the launch, as we were able to do some work from the camp at the post, besides repacking all our supplies for moving.

Before starting out from our camp at the head of the English river, it was necessary to establish a base of supplies in the most central place possible. The Hudson's Bay Company's post, Mattawa, which had been moved from the English river to the upper end of Pakwash lake, was decided upon, as all the country north of there could be easily worked from that point. After taking out one month's supplies for each party, we moved the balance to Mattawa post, returning to the end of Lac Seul on July 27.

On the trip starting from here I gave Mr. Moodie the Wenasaga river and its tributaries to work, while I took the Trout lake watershed.

The Wenasaga river is a good driveable river, but like the rivers travelled before it has its faults. It has a great many rapids and small falls, is very crooked with short bends, the banks are very low and thickly covered with small brush overhanging the water, which would catch and hold the logs. Then again there are many large lake expansions, which have practically no current in them. Thus the timber would have to be boomed across, by means of a launch or sailboats, which would add greatly to the expense of logging.

From the mouth of the river to within one mile of the mouth of Sandy Beach Narrows river, which flows into the Wenasaga river from the east, about five miles above Bluffy lake, there is absolutely no timber of any value. A great portion of this section was burned over probably eight or ten years ago; the remainder was burned during the summer of 1910, nothing now remaining except spruce and jackpine scrub.

From one mile below the mouth of Sandy Beach Narrows river and running up the Wenasaga river for three miles, the timber is good on both sides. There is a block here of about 4,500 acres, on which the timber runs 1,100 cubic feet per acre thus giving an approximate total of 4,950,000 cubic feet. The stand consists of forty per cent of jackpine with average diameter of seven inches, thirty per cent of spruce with average diameter of seven inches and thirty per cent of poplar with average diameter of eight inches. Above here there is nothing on the east side of the river except muskeg and scrub, until Slate lake is reached. On the west side a patch starts about one mile below the Oochi river, and extends to the lower end of Slate lake. It has an area of about 2,000 acres, on which the timber runs 650 cubic feet per acre, giving a total of 1,300,000 cubic feet. The stand consists of fifty per cent of jackpine with average diameter of seven inches, forty per cent of spruce with average diameter of seven inches and ten per cent of poplar with average diameter of nine inches.

On Slate lake a good block of timber is found, especially on the west side. On this side the timber extends the whole length of the lake and has an average depth of one mile. The approximate area is nine square miles, or 5,760 acres. The timber on it will run 1,300 cubic feet per acre, thus giving a total of 7,488,000 cubic feet. The stand consists of fifty-five per cent of poplar with an average diameter of nine inches, thirty per cent of jackpine with average diameter of seven inches, and fifteen per cent of spruce with average diameter of six inches. The poplar here is of good size, tall, straight and free from limbs.

On the east side of Slate lake the timber is more or less in patches, in some places being really good, while in others it is quite poor. This block runs the entire length of the lake, but is not much over half a mile in depth. It has an approximate area of 4,000 acres, on which the timber runs 800 cubic feet per acre, thus giving a total of 3,200,000 cubic feet. The stand consists of seventy-five per cent of poplar with average diameter of seven inches, fifteen per cent of spruce with average diameter of six inches and ten per cent of jackpine with average diameter of eight inches.

At the north end of Slate lake, running northeast towards Papaonga lake there is a block of good timber covering an area of about 2,000 acres. The timber on it runs 800 cubic feet per acre, giving a total of 1,600,000 cubic feet. The stand consisted of thirty per cent of poplar with average diameter of eight inches, thirty per cent of jackpine with average diameter of eight inches, twenty per cent of spruce with average diameter of seven inches and twenty per cent of white birch with average diameter of six inches.

For five miles up the river from Slate lake there is nothing but low muskeg covered with scrub. From here to Lake Margaret the timber was totally destroyed by fire during the summer of 1910. This burn reaches east to the east end of Lake Sesikinaga.

On the west side of Lake Margaret there is a block of about 800 acres, on which the timber runs 600 cubic feet, thus giving a total of 480,000 cubic feet. The stand consists of eighty per cent of poplar with average diameter of eight inches, ten per cent of spruce with average diameter of seven inches and ten per cent of jackpine with average diameter of eight inches. On the east side of the lake is a block of 1,000 acres, on which the timber runs 550,000 cubic feet. The stand consists of sixty per cent of poplar with average diameter of eight inches, twenty per cent of jackpine with average diameter of seven inches, ten per cent of spruce with average diameter of seven inches and ten per cent of tamarack with average diameter of eight inches.

At the chutes there is another block of about 300 acres, on which the timber runs 800 cubic feet per acre, making a total of 240,000 cubic feet. The stand consists of forty per cent of poplar with average diameter of eight inches, twenty per cent of spruce with average diameter of seven inches, twenty per cent of jackpine with average diameter of eight inches and twenty per cent of tamarack with average diameter of eight inches.

With the exception of these three patches there is nothing to the head of the Wenasaga river, the country being low and marshy and thickly covered with scrub, jackpine and spruce. Around Lake Sesikinaga is all scrub, back from the lake being all muskeg covered with small spruce and jackpine.

On the Papaonga river there is nothing except a block on the south side of the first lake, which has been dealt with from the north end of Slate lake. Location of these blocks on the map, as marked by Mr. Moodie, is all on south side of Papaonga lake, not touching Slate lake at all.

There is nothing on Sandy Beach Narrows river until Little Sandy Beach Narrows lake is reached. On the south side of the lake there is a patch of about 1,000 acres, on which the timber runs 700 cubic feet per acre. This gives a total of 700,000 cubic feet. The stand consists of eighty per cent of balsam (black) poplar and twenty per cent of spruce. The north side of this lake was burned over in 1910. From here to the head of the river is all old burn and muskeg. Around Sandy Beach Narrows lake the country is very rough and rocky and covered with scrub.

On Loon river which flows into the upper end of Bluffy lake, there is nothing except one block on the south side of Loon lake, where the river flows in. This block has an area of about 400 acres, on which the timber runs 700 cubic feet per acre, giving a total of 280,000 cubic feet. The stand consists of seventy per cent of jackpine and thirty per cent of poplar, each having an average diameter of seven inches. Above here as far as could be reached by canoe, the country is rocky, rolling and covered with scrub jackpine, none over five inches in diameter. Between Loon lake and Bluffy lake is low and mostly muskeg.

On the upper part of the Oochi river there are two small blocks of very good timber. The first has an area of about 350 acres, the timber running 600 cubic feet per acre, giving a total of 210,000 cubic feet. The stand consists of forty per cent of poplar with average diameter of eight inches, thirty per cent of spruce with average diameter of seven inches and thirty per cent of jackpine with average diameter of eight inches. The other block has an area of about 300 acres, the timber running 600 cubic feet per acre, giving a total of 180,000 cubic feet. The stand consists of sixty per cent of poplar with average diameter of nine inches, thirty per cent of spruce with average diameter of eight inches and ten per cent of jackpine with average diameter of eight inches.

The Oochi river is driveable from Sucker lake to the mouth, above the lake being very narrow and shallow.

Thus the total amount of timber found on the Wenasaga river would be approximately 21,178,000 cubic feet.

TROUT LAKE AND PAKWASH LAKES.

In working the Trout Lake watershed I went up the Wenasaga river, the Oochi river and then portaged over into Fly lake, which is the source of the chain of lakes, and Woman river, which flow into Trout Lake river. From around the head of Fly lake I started working the timber with the exception of the two blocks on the Oochi river, which I have already mentioned.

For the entire length of Fly lake and to the southwest corner of Clearwater lake the timber is very good. It is in a strip averaging one mile in depth on either side, back of which the entire country is muskeg or small rocky hills covered with scrub.

This block has an approximate area of sixteen square miles, or 10,240 acres. The timber averages 700 cubic feet per acre. The stand consists of seventy per cent of spruce with average diameter of seven inches, fifteen per cent of white birch with average diameter of six inches, ten per cent of poplar with average diameter of eight inches and five per cent of jackpine with average diameter of seven inches. There has been considerable tamarack through this section, but it is now all dead, having been killed about two years ago by worms or flies. On parts of this block the timber runs as high as 1,100 cubic feet per acre, while in a good many parts it will not average 500 cubic feet per acre.

On the east side of Clearwater lake there is a block containing about seven square miles, or 4,480 acres, of timber, which will run 600 cubic feet per acre, the total stand amounting to 2,688,000 cubic feet. The stand consists of sixty per cent of spruce with average diameter of seven inches, twenty per cent of poplar with average diameter of eight inches, ten per cent of jackpine with average diameter of eight inches and ten per cent of white birch with average diameter of six inches.

A new burn comes in at the southwest end of Clearwater lake, and extends north on the west side to the upper end of Washagomis lake. The southern boundary extends southwest towards Trout Lake river. From the top of a hill we could see beyond the valley of Woman lake and river, all of which has been burned over. From this north end of Clearwater lake on the east side, and from where the new burn stops on the west side, the country has all been burned over, probably twelve or fifteen years ago, there being nothing on it except scrub jackpine and small white birch. This continues north to where the river turns west. To the north of this chain of lakes and over the divide, the country has all been burned over, there being no timber for miles. The most northern lake of this chain is called Redcock lake.

On the east end of Redcock lake there is a block of very good timber covering an area of about 1,500 acres. The timber runs about 700 cubic feet per acre, thus giving a total of 1,050,000 cubic feet. The stand consists of sixty per cent of spruce with an average diameter of seven inches, fifteen per cent of poplar with average diameter of eight inches, fifteen per cent of white birch with average diameter of six inches, five per cent of jackpine with average diameter of seven inches and five per cent of balsam fir with average diameter of six inches. This is the first balsam fir I have seen since the work started and it is very poor. The large spruce in this section is either dead or has been thrown by the wind.

Turning west at Redcock lake and working towards the head of Woman lake, there is no timber, the country being all muskeg or old and new burn. The timber on both sides of Woman lake and river has all been burned right down to the junction with Trout Lake river. This is the same burn as seen on the west side of Clearwater lake.

A portage of sixteen chains took us from the north end of Woman lake into Narrow lake. The only timber found around this lake is on the north side about five miles along the lake. The quality of the timber is just fair, being small and in patches. This strip is one and one-half miles in depth, thus giving an approximate area of 5,000 acres. The stand runs 550 cubic feet per acre, or a total of 2,750,000 cubic feet. The stand consists of fifty per cent of spruce with average diameter of seven inches, thirty per cent of jackpine with average diameter of seven inches, ten per cent of poplar with average diameter of eight inches and ten per cent of white birch with average diameter of five inches. To the north of this the country is all burned over. On the south side of Narrow lake from Woman lake west to Trout lake has all been burned. The north side, from where the above mentioned block of timber stops, has all been burned. This burn also reaches to the east side of Trout lake, and north for miles.

From the west end of Narrow lake, a portage two and a quarter miles in length nearly due north brought us into a small lake which flows into the east side of Trout lake. This portage, the entire length of which was through burn, had to be cleared out before it could be used. Around the above lake and west to Trout lake is all burn and muskeg.

Around the north side of Trout lake the timber is quite poor. The country is very rocky, with practically no soil. Thus the timber is small except in a few places. It is quite thick, but the larger trees have been thrown by wind. On the east side of the largest bay on this side of the lake there is a patch of about 3,000 acres, the timber running 600 cubic feet per acre, or giving a total of 1,800,000 cubic feet. The stand consists of eighty per cent of spruce with average diameter of six inches, fifteen per cent of jackpine with average diameter of seven inches and five per cent of poplar with average diameter of eight inches. Back of this strip is all muskeg and scrub. At the north end of this bay, a burn of 1910 comes into the lake shore. This burn comes in from the west and leaves a strip of timber as far as the northwest corner of the lake. This strip has an area of about 6,000 acres, on which the timber averages 500 cubic feet per acre, thus giving a total of 3,000,000 cubic feet. The stand is practically the same as on the east side of the bay.

The northern part of Trout lake is thickly studded with islands, the larger ones having been burnt over, the smaller ones being low and covered with scrub.

On the west side of the lake the timber is better than on the north side. There is a block here of approximately 4,200 acres, the timber running 900 cubic feet per acre, thus giving a total of 3,780,000 cubic feet. From the end of this block and on south is another block of about 1,800 acres, the timber running 750 cubic feet, thus giving a total of 1,350,000 cubic feet. The stand consists of eighty per cent of spruce with average diameter of seven inches, ten per cent of jackpine with average diameter of eight inches, ten per cent of poplar with average diameter of eight inches and ten per cent of white birch with average diameter of six inches.

On the point on the south side of the lake and just east of Cat island, the timber runs about 500 cubic feet per acre. Parts of it are poor through having been thrown a great deal by the wind. This block has an approximate area of 3,200 acres, thus giving a total of 1,600,000 cubic feet. The stand consists of eighty per cent of spruce with average diameter of seven inches, ten per cent of jackpine with average diameter of seven inches and ten per cent of poplar with average diameter of eight inches.

The long point on the east side of the lake has some good timber on it. The block has an area of about 5,000 acres, the timber running 800 cubic feet per acre, giving a total of 4,000,000 cubic feet. The stand consists of spruce and jackpine, forty per cent of each with average diameter of seven inches, ten per cent of poplar with average diameter of eight inches and ten per cent of white birch with average diameter of six inches.

On the south side of Trout lake, east of the river, there is a strip which runs down along the river and to the lower end of Otter lake. It contains about 2,000 acres, and the timber runs 500 feet per acre giving a total of 1,000,000 cubic feet. The stand consists of sixty per cent of spruce with average diameter of six inches, twenty per cent poplar with average diameter of seven inches, fifteen per cent white birch with average diameter of six inches and five per cent of jackpine with average diameter of seven inches.

Outside of these blocks the timber around Trout lake has all been burned over, from one to eight years ago.

Along Trout Lake river the timber has all been burned except two small blocks. The first at the junction of Woman river, contains about 600 acres. The timber runs 650 cubic feet per acre, giving a total of 390,000 cubic feet. Jackpine forms about seventy per cent of the stand with an average diameter of nine inches, spruce ten per cent with average diameter of seven inches, poplar ten per cent with average diameter of eight inches and white birch ten per cent with average diameter of six inches. The other block is on the east side of the river about four or five miles from the mouth.

It has an area of about 125 acres, the timber runs 1,000 cubic feet per acre, giving a total of 125,000 cubic feet. Poplar forms eighty per cent of the stand with average diameter of eleven inches, while jackpine makes up the remainder with average diameter of eight inches.

Trout Lake river can be easily made driveable, both from the head of Fly lake and from Trout lake. There are a number of rapids and falls on this river, one sixty feet high, but these would not be so hard to contend with as the lake expansions.

On August 25 I arrived at Mattawa post where I met Mr. Moodie, who had arrived some time before me.

On Upper Pakwash lake there is no merchantable timber at all, the country being very rocky and covered with scrub.

On the west side of Lower Pakwash lake, there is a small block of timber containing an area of approximately 850 acres. The timber runs 700 cubic feet per acre, giving a total of 595,000 cubic feet. The stand consists of seventy-five per cent of poplar running from four to sixteen inches in diameter, fifteen per cent of spruce running from four to eighteen inches in diameter, and ten per cent of jackpine from six to thirteen inches in diameter.

One mile due east of Pakwash lake and east of Mattawa post, there is another block of about 640 acres. The timber runs 750 cubic feet per acre, giving a total of 480,000 cubic feet. The stand consists of sixty-five per cent of poplar four to twenty inches, twenty per cent of jackpine from six to seventeen inches and fifteen per cent of spruce from four inches to seventeen inches.

The total amount of timber located on the Trout Lake watershed and Pakwash lakes would be approximately 31,776,000 cubic feet.

RED LAKE AND GULLROCK LAKE.

From Mattawa we divided the remainder of the territory into two parts, Mr. Moodie taking the Gullrock lake and Red Lake watersheds, while I took a stream flowing into the southwest corner of Gullrock lake, the Medicine-stone lakes, the Long-legged river and the north bank of the English river. On the completion of these parts, Mr. Moodie worked the north side of Lac Seul from the Wenasaga river east to the Manitou river, and I worked that part between the Manitou river and the Hudson's Bay post at Lac Seul.

Mr. Moodie started on his section on August 28 working north to the divide on the north side of Red lake.

Along Red Lake river from Pakwash lake to Gullrock lake the country is very low and swampy in many places. What timber there is along the river is very scattered and in small patches, the location, quantity and quality of which will be shown on the map.

The country around Gullrock lake has all been burned over except the south end of the lake. There is a block of good timber on this side just west of where the river flows out of the lake. It has an approximate area of 2,500 acres, the timber running 850 cubic feet per acre, or a total of 2,125,000 cubic feet. The stand consists of forty per cent of spruce with average diameter of seven inches, forty per cent of jackpine with average diameter of eight inches and twenty per cent of poplar with average diameter of eight inches. The rest of the south side is very rocky and covered with scrub.

The fires which destroyed the timber around Gullrock lake occurred, some in 1910, and the others probably about twelve years ago.

The timber along the river from Gullrock lake to Red lake is very poor except in small patches. These consist of small poplar which is very scattered and has an average diameter of only five inches.

Around Red lake there are some blocks of very good timber, although the greater part of the country has been burned over. At the southeast end of the lake there is a block containing about 3,000 acres. The timber runs 950 cubic feet per acre, making a total of 2,850,000 cubic feet. The stand consists of eighty per cent of poplar with diameter from four to twenty-one inches, ten per cent of jackpine from four to sixteen inches and ten per cent of spruce from four to eighteen inches.

About two miles north of this block on the east side of the lake is another block of about 1,500 acres. The timber runs 750 cubic feet per acre, giving a total of 1,125,000 cubic feet. The stand consists of fifty per cent of jackpine with diameter from six to seventeen inches, thirty per cent of spruce from six to fourteen inches and twenty per cent of poplar from four to thirteen inches.

North of this again, about two miles, is another block which extends east to the south end of East bay. It has an area of about 3,500 acres, on which the timber runs 1,100 cubic feet per acre, giving a total of 3,850,000 cubic feet. The stand consists of sixty per cent of poplar with average diameter of ten inches, twenty per cent of spruce with average diameter of seven inches and twenty per cent of jackpine with average diameter of eight inches.

On the south side of the narrows near the northeast end of the lake, is a block of 800 acres. The timber runs 550 cubic feet per acre, giving a total of 440,000 cubic feet. The stand consists of eighty per cent of spruce with diameter from four to twenty-four inches, ten per cent of jackpine with diameter from four to sixteen inches and ten per cent of tamarack with diameter from seven to eighteen inches. On the north side of the narrows there is another block containing approximately 9,600 acres. The timber on it runs 850 cubic feet per acre, making a total of 8,160,000 cubic feet. The stand consists of fifty per cent of poplar with diameter from four to twenty-six inches, thirty per cent of spruce diameter from four to twenty-two inches, fifteen per cent of jackpine with diameter from four to twenty inches and five per cent of tamarack from seven to seventeen inches.

Another block between the northeast corner of Red lake and the west side of East bay contains an area of about 1,200 acres. The timber runs 800 cubic feet per acre or a total of 960,000 cubic feet. The stand consists of seventy-five per cent of poplar with diameter from four to twenty-two inches, fifteen per cent jackpine with diameter seven to sixteen inches and ten per cent of spruce with diameter from four to nineteen inches.

There is a narrow strip on both sides of the river between Red lake and Little Vermilion lake, which would have an approximate area of 700 acres. The timber runs 700 cubic feet per acre or a total of 490,000 cubic feet. The stand consists of eighty-five per cent of poplar with diameter from four to twenty inches, ten per cent of jackpine from six to eleven inches and five per cent of spruce from four to fourteen inches.

At the southeast end of Little Vermilion lake there is a block of about 600 acres. The timber runs 650 cubic feet per acre, giving a total of 390,000 cubic feet. The stand consists of eighty per cent of poplar with diameter from four to twenty-four inches, fifteen per cent jackpine from six to fourteen inches and five per cent of spruce with diameter from four to seventeen inches.

The country north of here up to the north end of Rat House lake was burned over about twelve years ago, while to the north, east and west from Rat House lake, as far as the divide, the timber was all burned during the summer of 1910.

There the three other small blocks of fair timber around Red lake. One is on the south side of the lake, southwest of Mackenzie island. It has an area of about 700 acres, on which the timber runs 600 cubic feet per acre, giving a total of 420,000 cubic feet. The stand consists of forty-five per cent of jackpine with diameter from six to seventeen inches, forty per cent of poplar from four to twenty-one inches and fifteen per cent of spruce from four to eighteen inches. The other two blocks are at the west end of the lake, on the shores of Pipestone bay. One on the northwest corner of the bay has an area of 450 acres. The timber runs 450 cubic feet per acre, giving a total of 202,500 cubic feet. The stand consists of eighty per cent of poplar with diameter from four to sixteen inches, ten per cent of spruce from four to fourteen inches and ten per cent of jackpine from six to twelve inches.

The other block is at the southeast end of Pipestone bay. It has an area of about 320 acres, on which the timber runs 500 cubic feet per acre, thus giving a total of 160,000 cubic feet. The stand consists of ninety-five per cent of poplar with diameter from four to eighteen inches and five per cent of jackpine with diameter from six to fourteen inches.

All the other country around Red lake has been burned over some time or other, there being no merchantable timber on it at all, and from the rocky condition of the country, which has practically no soil, there is very little prospect of there being any timber for years to come even on the older burns.

On the west side of Keg lake there is a small block of very good timber. It has an area of 400 acres, the timber running 650 cubic feet per acre, thus giving a total of 260,000 cubic feet. The stand consists of ninety-five per cent of poplar with diameter from four to sixteen inches and five per cent of jackpine with diameter from six to twelve inches. On the north side of Keg lake and on the east side of the river is another block of about 320 acres. The timber on it runs 450 cubic feet per acre. giving a total of 144,000 cubic feet. The stand consists of sixty per cent of poplar with diameter from four to fourteen inches, thirty per cent of jackpine, diameters from six to seventeen inches and ten per cent of spruce, diameters from four to eleven inches.

The river between Red lake and Gullrock lake has very little current. It is deep and very crooked, while both sides are very weedy, which would make it hard for driving. From Gullrock lake to Pakwash lake the river has a very good current. There are four rapids on it, only one of which would retard the work of driving it.

On the 29th of August I left Mattawa post and travelled to the southwest corner of Gullrock lake and started up a small river which flows into the lake there. This river has its source near the waters flowing into Medicine-stone lakes. I worked up this river to the head, thence across into the Medicine-stone lakes and then north to Red lake. Through this section there is practically no merchantable timber, nearly all having been burned, some quite recently, the rest from twenty-five to thirty years ago.

About half a mile up the river from Gullrock lake on the south side of Grassy lake, there is a small area of about 125 acres. The timber on it runs 900 cubic feet per acre, giving a total of 112,500 cubic feet. The stand consists of sixty per cent of jackpine with average diameter of eight inches, fifteen per cent of spruce with average diameter of seven inches, fifteen per cent of poplar with average diameter of nine inches and ten per cent of white birch with average diameter of six inches. Back of this and on top of the ridge is scrub jackpine and white birch. On the other side of the ridge it slopes back into lowland and muskeg. On the north side of Grassy lake, a burn of 1910 has destroyed all the timber. For two miles above this lake, it is all muskeg or rocky hills covered with scrub. Here the burn of 1910 comes into the river again and extends to about half way up Bug lake. From here to the head of Bug lake on the south side was burned over about eight or ten years ago. The section of country from Bug lake over to Medicine-stone lake is all muskeg, there being no merchantable timber whatever on it. The river from Grassy lake to Bug lake could not be made driveable, for at its best it is hardly large enough for a nineteen-foot canoe.

The country around the Medicine-stone lakes and north to the south side of Red lake was all burned over, I should say between twenty-five and thirty years ago. This whole section is now covered with scrub jackpine, none of it reaching thirty feet in height and six inches in diameter. The burn of 1910 comes in on the east side of that lake, which is situated just south of Red lake.

Medicine-stone lakes are surrounded by quite high rocky hills, and in paddling along the lake the bare rock is plainly seen, the scrub on it being so scattered. The river flowing out of the lake is also far too small for driving.

Finishing this section I came out on to Red lake and thence down Red Lake river to Mattawa post.

The total amount of timber located on the Gullrock Lake and Red Lake watersheds would be approximately 21,689,000 cubic feet.

WEST OF LAC SEUL.

On reaching Mattawa post I found that we had not supplies enough to do us while finishing this section of the country; therefore, it was necessary for me to go in to Lac Seul post for more provisions. Returning from there I went down the English river and worked up Long-legged river to its head. From the mouth of this river up to the middle part of Long-legged lake has been completely burned, a fire going through it about eight or ten years ago, while another in 1910 burned over a large area of it again.

The upper part of Long-legged lake is very much the same as around Medicine-stone lakes, having high rocky hills around it, which are covered with scrub, there being insufficient soil to sustain the timber.

On finishing this river I came back down it and then worked the north side of the English river to the foot of Lac Seul, where there is some very good timber.

From the mouth of Long-legged river to about half way up Barnston lake there is a strip averaging one mile in depth. It has an approximate area of 11,500 acres, on which the timber runs 850 cubic feet per acre, giving a total of 9,775,000 cubic feet. The stand consists of sixty per cent of poplar with average diameter of eight inches, twenty-five per cent of jackpine with average diameter of seven inches and fifteen per cent of spruce with average diameter of seven inches.

From here to where the long portage goes across to the lower end of Duck lake, the timber will run 900 cubic feet per acre. There are about 4,200 acres in this area, giving a total of 3,780,000 cubic feet. The stand consists of the same species as in the last section, the quality being practically the same.

On the point where the portage crosses to Duck lake there is a block of about 1,200 acres, on which the timber runs 1,300 cubic feet per acre, giving a total of 1,560,000 cubic feet. The stand consists of sixty per cent of poplar with average diameter of eleven inches, twenty per cent of jackpine with average diameter of nine inches, fifteen per cent of spruce with average diameter of eight inches and five per cent of red pine with average diameter of twelve inches.

From here to the mouth of the river flowing out of Pakwash lake, there is a block of about 3,600 acres, where the timber runs 900 cubic feet per acre, giving a total of 3,240,000 cubic feet. The stand runs the same as farther down the river. In some places the timber reaches back for nearly two miles from the river, in other places not much over half a mile. Back of this is low wet country covered with scrub.

There is a strip on both sides of the river between Pakwash lake and the English river. The total area would be approximately 7,000 acres, on which the timber runs 650 cubic feet per acre right through, thus giving a total of 4,550,000 cubic feet. The stand consists of seventy per cent of poplar with average diameter of nine inches, fifteen per cent of jackpine with average diameter of eight inches and fifteen per cent of spruce with average diameter of seven inches.

From the head of Duck lake to within one mile of the west end of Lac Seul, the timber is not quite so good as further down the English river. It will run about 650 cubic feet per acre, of which there is approximately 9,000 acres, thus making a total of 5,850,000 cubic feet. The stand consists of seventy-five per cent of poplar with average diameter of seven inches, fifteen per cent of jackpine with average diameter of seven inches, and ten per cent of spruce with average diameter of seven inches. From the end of this timber to the head of the river is either small scrub or burn.

Between the head of the English river and the Wenasaga river, there is a block of about 800 acres. The stand will run 850 cubic feet per acre, making a total of 680,000 cubic feet. The stand consists of fifty per cent of poplar with average diameter of nine inches, and fifty per cent of spruce with average diameter of seven inches.

On the territory covered on this trip the total quantity of timber would be approximately 29,435,000 cubic feet.

NORTH SIDE OF LAC SEUL.

From here I moved east to the mouth of the Manitou river, where I met Mr. Moodie, who was working the north side of Lac Seul from the Wenasaga river east to this point.

Starting from the Wenasaga river and working east along the north side of the lake, Mr. Moodie describes the timber in the following way:—From the mouth of the Wenasaga river there is a strip which runs east for about twelve miles along the lake. It has an average depth of three miles and an approximate area of 25,000 acres. The timber on it runs about 900 cubic feet per acre, giving a total of 22,500,000 cubic feet. The stand consists of fifty per cent of poplar with diameter from four to eighteen inches, twenty-five per cent of spruce with diameter from four to sixteen inches, fifteen per cent of jackpine, with diameter from six to fifteen inches, and ten per cent of white birch with diameter from four to eight inches.

From here east for about four miles or to Big Inlet on the north side of the lake, there is nothing but scrub. Along the northwest side of this inlet there is a strip of timber which will run 800 cubic feet per acre. It has an approximate area of 6,500 acres. The timber on it runs about 800 cubic feet per acre, giving a total of 5,200,000 cubic feet. The stand is the same as on the last area.

Around the east side of Big inlet and along the lake, to the mouth of the Manitou river, there is no timber of any commercial value, the country being rocky and covered with scrub.

On the lower part of the Manitou river there is no timber of any value. On the west side of Manitou lake there is a tract of very good timber. This block crosses the river just below the lake and runs south towards Lac Seul for about six miles. It has an area of about 7,000 acres on which the timber runs 950 cubic feet per acre, thus giving a total of 6,650,000 cubic feet. The stand consists of forty per cent of poplar with diameter from five to sixteen inches, thirty per cent of jackpine with diameter five to fourteen inches and thirty per cent of spruce, with diameter from five to twelve inches.

In the interior of the country between the Wenasaga river and the Manitou river, there is a large area of timber which is of much poorer quality than that near the lake. This section would cover an area of probably 225 square miles or 144,000 acres, on which the timber should average 600 cubic feet per acre throughout, thus giving a total of 86,400,000 cubic feet. The stand consists of poplar, jackpine, spruce and white birch running from four to sixteen inches in diameter.

This completed Mr. Moodie's territory with the exception of some on the north side of the lake, east of the Hudson's Bay Company's post.

Starting just east of the mouth of the Manitou river, I worked that section east to the Lac Seul post and as far inland as it was possible to reach. I ran lines back at frequent intervals, which ranged from three to eight miles in length. Near Lac

Seul post I found an old transit line which ran due north and followed it for nearly nine miles to a large lake, where I had to turn back, as it was impossible to get across.

The timber close to Lac Seul is much better than farther inland, as there is a strip between the Manitou river and Lac Seul, on which the timber is very good. This strip averages about two miles in depth, and will have to be divided into about five blocks on account of the difference in quality of the timber.

The first block east of the mouth of the Manitou river has an approximate area of 4,200 acres on which the timber runs about 1,200 cubic feet per acre, giving a total of 5,040,000 cubic feet. The stand consists of forty per cent of jackpine with average diameter of eight inches, fifteen per cent of poplar with average diameter of nine inches, fifteen per cent of white birch with average diameter of seven inches, and ten per cent of red pine with average diameter of twelve inches.

Next to this block and east is another on which the timber runs 1,050 cubic feet per acre. It has an approximate area of 8,000 acres, with a total of 8,400,000 cubic feet. The stand consists of thirty per cent of jackpine with average diameter of eight inches, twenty-five per cent of poplar with average diameter of nine inches, twenty-five per cent of white birch with average diameter of seven inches and twenty per cent of spruce with average diameter of eight inches.

The third block along the lake here has an area of about 7,500 acres, on which the timber runs 1,100 cubic feet per acre, thus giving a total of 8,250,000 cubic feet. The stand consists of thirty per cent of jackpine with average diameter of eight inches, thirty per cent of poplar with average diameter of nine inches, twenty per cent of spruce with average diameter of seven inches and twenty per cent of white birch with average diameter of six inches.

The next block has an approximate area of 4,500 acres on which the timber is somewhat better. It will run about 1,300 cubic feet per acre, thus giving a total of 5,850,000 cubic feet. The stand consists of forty per cent of poplar with average diameter of nine inches, thirty per cent of jackpine with average diameter of eight inches, twenty per cent of spruce with average diameter of eight inches and ten per cent of white birch with average diameter of six inches.

The fifth and last block along the lake reaches to within about one mile of the Hudson's Bay Company's post, Lac Seul. It is the smallest block of the five and the timber is poorer, having been culled by the Hudson's Bay Company's people and the Indians, for wood, &c. It has an area of about 2,200 acres, on which the timber runs 800 cubic feet per acre, thus giving a total of 1,760,000 cubic feet. The stand consists of thirty per cent of jackpine with average diameter of eight inches, thirty per cent of poplar with average diameter of eight inches, twenty per cent of spruce with average diameter of seven inches, fifteen per cent of white birch with average diameter of six inches and five per cent of red pine with average diameter of ten inches.

Back of the above strips and running north for about sixteen miles, there is a large area, which I could not reach except for short distances on the different sides. North of Lac Seul post I ran through it for over eight miles, while in other places I ran lines from one to four miles back into it. The timber on parts of it is very good, while in other places it seems to get to a certain size and then dies. There is an area east of the Manitou river and reaching north from Lac Seul nearly to Swan river, which would have an area of approximately 250 square miles, or 160,000 acres. On this area from what I covered I would judge the timber to run about 700 cubic feet per acre all through, thus giving a total of approximately 112,000,000 cubic feet. The stand is made up of jackpine, spruce, poplar and white birch, but it would be hard to give the percentage of each species. The trees run from four to fourteen inches in diameter, the larger ones being badly thrown by the wind. This completed my section of the territory on the north of Lac Seul.

Mr. Moodie worked a section east of Lac Seul post, while I was in Winnipeg getting money to pay off the canoemen. The timber runs along the edge of the lake from about a mile east of the post for nearly twenty miles or about two miles east of Tugtegweick river. It has an average depth of one mile. The total area of the strip would be approximately 13,000 acres, or a little over twenty square miles. The timber runs about 800 cubic feet per acre throughout, giving a total of 10,400,000 cubic feet. The stand consists of about eighty per cent of poplar from four to twelve inches in diameter and twenty per cent of spruce and jackpine from five to fourteen inches in diameter.

The total amount of timber estimated on the north side of Lac Seul from the Wenasaga river east, and for about sixteen miles north from the lake, is approximately 272,450,000 cubic feet.

The figures included herein, together with about 4,000,000 cubic feet of timber shown in small blocks on the map, would give a total for the whole territory covered, of, approximately, 405,000,000 cubic feet. This, it will be noticed, is a very small amount for the size of the territory covered. I may say in the first place that the country does not seem to have ever been really heavily wooded. It is a very rolling country with numerous patches of muskeg running through it, besides a great many rocky hills, none of which rise to any great height. There seems to be very little soil except close to the water, where it seems to be dried out for about one to three miles back, while away inland as a rule it is very swampy. Where a fire has run through, one will invariably find nothing but the naked rock, which goes to show there was never much soil. Thus there is nothing to sustain the tree after it gets to a certain size.

Besides a large amount of the country being muskeg and marsh, an enormous area, especially the northern part, towards the divide, has been burned over at some time or other. Some of the fires occurred probably twenty-five or thirty years ago, while a very large area was burned over during the summer of 1910. These fires are due mostly to the carelessness of the Indians, who do not seem to realize that by destroying the forest they are taking away their own livelihood, as they depend almost solely on the fur which they catch during the winter months.

They roam around during the summer hunting moose, &c., and leave fires wherever they happen to be, and until the country is opened up and the white people get in, it will be next to impossible to keep them from destroying the timber.

Respectfully submitted,

J. W. CURRY.

No. 30.

REPORT OF GEO. A. MULLOY.

Fort Smith, Alberta, June 20, 1911.

R. H. Campbell, Esq.,
Director of Forestry,
Ottawa.

Sir,—I beg to submit a report of work done by my assistant, L. Boyd, and myself during the past month. I arrived at Fort Smith on June 8, and immediately made arrangements for a trip to the northern herd of wood bison, called the Salt river herd. I was advised that the country was almost impassable at this time of the year owing to the great quantity of water in the muskegs and hay-meadows. The rivers also cannot be forded in the usual way, but have to be crossed by means of rafts built on the spot. In addition to this the flies are very numerous and worry the pack animals, making them unmanageable at times. However, I decided to make a preliminary trip covering as much ground as possible and getting an idea of the lay of the country as well as learning some of the main trails. I think I cannot do better than to give you a resumé of my diary for the fourteen days we were away from headquarters.

Monday, June 12.—The morning was taken up in the usual delays peculiar to any trip of this kind. We got started, however, at 1.25 p.m. The first stage of our trip will be to the Salt river Indian settlement which is near the mouth of the Salt river. We intend following the trail cut by the mounted police, accompanied by Mr. H. V. Radford, last October. We have two pack horses and an Indian guide, but, fearing to pack the horses too heavily, we are travelling light, taking food for only two weeks.

We travelled eight or nine miles before sundown, *i.e.*, from Fort Smith to the bend in the Slave river opposite Big island. There is a good wagon trail so far, and the land is high and dry. The country through which we have come is very much better than that around Fort Smith. The sandy jackpine ridges begin to run out about two or three miles west, and open poplar ridges and spruce groves make their appearance. The trail for the last two or three miles follows the bank of the Slave river very closely. The valley of the river here is 100 to 150 feet high and a mile or more in width. The timber through which we passed to-day would not do for sawmill purposes, the spruce of any size, say, fifteen to twenty inches diameter being so scattered and scarce and the poplar so small that its only use would be for building log houses, fences, corrals, &c. The land, however, is much better than at Fort Smith. The soil would be classed as a light sandy loam, and I think would be suitable for light farming. Oats would do well, other conditions favourable.

Tuesday, June 13.—Last night the flies were very bad, and the horses ran away with the hobbles on. The remainder of the wagon road to the Salt river settlement is very good. The land, however, changes in character a couple of miles from the settlement. Low swampy ground takes the place of poplar ridges. This is covered with a dense growth of scrub, jackpine, willow and alders. We crossed Salt river in a boat carrying the packs and swimming the horses. The river at this point is not salty, as we had supposed. Both the animals and ourselves drank it, and the guide says they use it all year round.

Here, too, is one of the great fishing grounds of this part of the country. The current is moderately swift and the river fifty yards wide. Just here one of our packhorses showed signs of giving out, but, as we could not get another and the Indian village was deserted, we decided to go on with him.

After dinner we headed due west again. For some distance west of the settlement open glades of parklike hay-meadows are encountered. The grass here is excellent, and the alders are bunched and clumped together, dividing the country into small fields. The footing is rather damp, but the wiry grass holds up the horses as well as the men. This hay-meadow country stretches for about a mile. Then the ground rises. Here a peculiar piece of land is encountered, *i.e.*, a large field of excellent grass surrounded by a dense growth of poplar. It looks like a small farm and some Indian has taken advantage of the opportunity, and dug up a large patch with a spade. He had planted potatoes, but they were not up yet. However, we discovered, when we returned, that they had grown five or six inches in our absence. This piece of open land is an excellent place for the Government Experimental Farm as it is close to Fort Smith and the soil cannot be excelled. It has a dark, rich mould to a depth of five or six inches with a sandy subsoil. In fact, this character of soil continues for a distance of four or five miles westward. The forest, however, changes in appearance. For miles on both sides of the trail stretch open poplar uplands. The ground is very level and covered with a dense growth of good grass, but the white trunks of the poplar seem like a forest of white-washed telegraph poles. No underbrush of any account is met with. Sparsely scattered through the poplar are individual spruce trees of very fair size twelve to twenty inches in diameter and very tall. The poplar, although not large, is very uniform, running about fifteen inches. We travelled until dark and camped on a rather marshy place beyond the poplar country.

Wednesday, June 14.—The first part of to-day's journey was through the largest hay-meadows we have yet encountered. They are in the valley formed by Salt mountain on the west and the poplar ridges bordering Salt river on the east. Where the trail intersects them, they are about one mile in width and from Salt mountain they can be seen for fifteen or twenty miles stretching northeasterly. Salt mountain is a low range of hills 100 feet above the surrounding country. They form the western slope of the watersheds of the Little Buffalo river. Although on the lookout for salt deposits, none of any account were seen near the trail. Several small salt streams and sloughs occur, however, in the muskeg bordering the hills. Salt mountain is very rough and rocky, and is covered with a growth of scrub, jackpine, spruce and poplar mixed. No timber of any size. A peculiar thing is here noticed. Depressions appear in the earth varying in size from three feet diameter to the size of a large house. They have three or four flat sides and converge to a sharp peak at the bottom. No inlet or outlet can be found, but no water of any account is found. The country has the appearance of having been covered by hugh blocks of sharp-cornered ice which have melted away and left their shapes in the earth. We travelled until dark again and camped on the eastern slope of the mountain.

Thursday, June 15.—This morning the guide left the main trail and struck across country to a more northern trail which we found out later was the winter trail for dogs coming from the Salt river and which winds up through the hay meadow on the east side of Salt mountain. This, of course, is a good trail in winter, avoiding Salt mountain altogether. We will likely make use of it ourselves. This new trail we marked anl blazed well. The country is becoming more and more swampy as we near the Little Buffalo river. Poplar, of course, predominates, but none of any value is seen. I found an old bison horn, the first sign of this animal we have seen. From here to the Little Buffalo river the country becomes more and more swampy. Dense scrub growth of all kinds impeded our passage, and, on account of the great depth of water on the trail, long detours had to be made, necessitating the cutting of a new trail in many places. One of our horses got mired here, and we had to carry his pack for the rest of the distance to the river. The Little Buffalo is a typical muskeg river, with very low or hardly any banks, with a swift current and yellow-coloured water. At this place it is only fifty to seventy-five feet wide, and at this time of the year is too deep to ford. Owing to this fact and also to the condition of the horses we camped here early.

Friday, June 16.—This morning we crossed the river. The guide, with our assistance, made a raft and on this we carried the packs over as well as ourselves. The horses were made to swim over. The least said about to-day's travel the better. It is just a continuation of the kind of country on the east side of the river. This whole country between the Little Buffalo river on the east and the three rivers shown on Mr. Radford's sketch is one big swamp—particularly so just before we come to the first river. There are innumerable small ponds, separated only by narrow necks of grass and matted willow-roots in which the animals sink shoulder-deep and which quakes and gives underfoot most alarmingly. Both the horses got mired and had to be hauled out with ropes. Shortly before Seton creek is reached, however, poplar ridges again make their appearance and on the first of these we made camp late at night.

Saturday, June 17.—A hard day. With an early start and with the guide under the impression that we want to go as far and as fast as possible, we plunge once more into water knee-deep. Although covered with water, the trail here has a firm bottom. Muskeg, however, prevails. We crossed three rivers, evidently those marked on Radford's map. They are not deep and only twenty to thirty feet wide, but the current is very swift and fording them at this time of the year is very difficult. About noon the guide discovered the first buffalo track. Then a day-old track is seen, and we press on with renewed vigour, hoping to see some before the day closes. This certainly is the best day's travelling we have done. Late at night we made camp on a poplar ridge near where the guide says there are many beaver ponds. In fact this animal seems very numerous up here, as we have seen fresh signs everywhere we went, more particularly near the rivers. This may account for much of the wet land here as the beaver are wont to run wing-dams and flood the country adjoining the rivers. I will look into this another time. I may add that, as this is the rainy season, it rained, as usual, all day.

Sunday, June 18.—At last there is a change in the character of the country. Big reaches of jackpine of fair size fifteen to twenty inches in diameter and numerous stretches of straight poplar of the same size are encountered everywhere. The spruce also begins to show itself, and although no really good spruce timber country is encountered, wherever it does appear it is very large, thirty inches or more in diameter. Then the buffalo signs begin to appear on every hand. Immense wallows surrounded us. The ground and trail are pitted with them. Fresh tracks are seen in many of the wallows and soft places and many of the tree trunks near the trail are used by the buffalo as scrubbing posts. On these much hair was hanging. This country is certainly a good range for stock of any kind. The buffalo, I imagine, use it as a winter or spring feeding-ground. The grass is luxuriant and there is plenty of shelter in the winter. The timber remains practically the same throughout the day's travel. In one place a huge whirlwind had made a big clearing several acres in extent. Fires, however, have been very rare, as no brulé or windfalls are seen at all. Early in the afternoon the guide lost the worn trail, and, as we were in the good buffalo country and our time limited on account of food, we decided to press on, following a well beaten buffalo trail. This trail had evidently been used very long and also very recently. One could easily see it was made by some wild animal because where the grass was poor it was straight and narrow and where the feeding was better it was very scattered and indistinct. Here we saw the first and only bison seen on the trip. He (an old bull) was standing in a big wallow fighting flies, and, although we used no particular caution in approaching him, he did not seem to notice us. We were able to get within thirty or forty feet of him. We watched him for some time and then he turned his head and saw us. He made off at a surprisingly fast pace considering his size and the lumbering way in which he travelled. He had probably been driven away from the herd by the younger bulls. He was not fat, although rich feed was on every hand.

Monday, June 19.—To-day as our grub was running low, we decided to track buffalo in this locality. The guide had no difficulty in striking the trail of a band going northwest from a small slough near our camp. Very soon we came out of the swamp into open country. Huge hay-meadows appear and patches of typical prairie land, dotted and divided by clumps of alders. These alders grow to the height of ten to fifteen feet and are sometimes as thick as one's wrist. This part of the country, the guide says, is the border of the great northwestern bison range. From this point westwards and northwards around Buffalo lake and river the country is all prairie. Of course, this is Indian information and, as we were not able this trip to penetrate so far. I will not vouch for the truth of it.

All day, although cold and raining constantly, we followed the trail we had struck in the morning. Here were tracks of six grown animals and one calf, but, as they were travelling with the wind, which was blowing northwest, and consequently scented us a long distance away, we did not come up with them, although we made many long detours endeavouring to head them off. Some of the Indians say that all the bison in this district go further west during the summer months, but Constable W. Johnston, of the R.N.W.M.P., doubts this and several others of the police support him in this opinion. I myself do not see any reason for their migration westward, and, as the wallows were well used and tracks and droppings were all fresh and in addition the feed plentiful, they evidently have their habitat here most of the year. The distance travelled by us to-day was about eight or ten miles northwest. This would bring us very close to the stream called Jarvis creek on Mr. Radford's map. No timber of any account grows in this district and with the exception of a few jackpine and poplar ridges the country is covered by hay-meadows dotted with alders.

This constitutes my diary for the outward journey. and, as our trail on the return journey was practically identical and as we saw no more buffalo, I will omit the remaining six days' notes. It may be of interest to state, however, that we ran out of food and I had to shoot game. This is very plentiful, moose, bear, caribou, beaver, partridges and prairie chickens abounding everywhere. It is cheaper by far to live by the rifle than to depend on salt pork. We made better time on our return journey, although we stopped many places to blaze the trail better and in many places to cut a new one around a slough or especially bad piece of muskeg. We arrived late on Sunday night, June 25.

Respectfully submitted,

GEO. A. MULLOY.

No. 31.

REPORT OF GEORGE A. MULLOY.

FORT SMITH, ALBERTA, July 27, 1911.

R. H. CAMPBELL, Esq.,
Director of Forestry,
Ottawa, Ont.

SIR,—I have to report the work done by Mr. Boyd and myself during the last month. On Monday, July 3, we started on a trip to the southern and western wood-bison range. Our intention was first to visit Moose lake and the district adjoining it and then to continue our trip south towards the Peace river. However, we were unable to reach the Peace River district, as our pack-horses ran away and we had to shorten the trip. As my diary is somewhat broken and condensed, I will accompany this report with a sketch of the country traversed.

Moose lake is a large swampy body of water almost directly west of Smith Landing. The distance is about eighty miles. From here to the Cariboo mountains, which can be plainly seen to the southwest, is fifty to sixty miles. The country all around the shores and westward as far as the eye can see is covered with good spruce timber, ranging from twenty to thirty inches in diameter. It is typical spruce country. The ground is covered with sphagnum moss and a thick undergrowth of alders and scrub of all kinds. I studied the country from the top of a high tree on a jackpine ridge southeast of Moose lake. and this fine timber belt appears to continue as far west as the Cariboo mountains. I was indeed surprised at the character of the country as my informants had told me it was a good prairie country inhabited by buffalo. However, this is not a buffalo range because absolutely no signs were found and the guide told me that they never come here even in winter.

The country out to Salt river from Smith's Landing is all swampy spruce, muskeg predominating. No timber of any kind except one poplar bluff is seen. The river here, seven to eight miles, west, is only a shallow creek with a stony bottom. The water is very salty and cannot be used for drinking. The west bank of the river rises, however. This rise continues for two miles or so, rocky in places and covered with small jackpine and poplar. Then the salt country is entered. Everywhere the sloughs and creeks are saturated with salt, and in many places where small ponds have dried up the mud is covered with a thick deposit of salt. It permeates everything. Even the leaves of the trees, when chewed up, taste salty. To the south and southeast a great salt plain stretches. Through this we passed on our return. The ground is covered with a very rich growth of grass, which does not seem to be affected by the salt.

Immediately west of the salt country is a rolling poplar-scrub country, which seems to be a favourite spot for buffalo. Deep-worn trails cross the main trail in every direction. Here, towards evening, we encountered a big buffalo bull. He appeared to me to be very much larger than any I had seen before. He was in good condition, and allowed us to come within fifty yards of where he stood in a wallow. Next morning we met one on the trail almost as large as the first. These were all we saw, because the bush at this time of the year is very dense. However, there are many buffalo wandering through here, because fresh tracks were met with at every step. The range here, though, is very narrow, and I think this is only used by the buffalo in their migrations north and south.

Further west, rolling country is encountered, with hay-meadows dotted with alder brush and broken by poplar groves, spruce clusters and scrub generally. Some of it is good timber but badly damaged by fire. Still further west and north, sandy jackpine ridges are the order. These, especially, are much burned over by fire, which has burned up the needles on the ground and scarred and blackened the boles of the trees. It seems to have been a ground fire of two or three years ago. The timber, however, is mostly standing and not dead. This is a moose country, and no one but the Indians come in here, and they only in the winter time and when driven to hunt moose for food.

This jackpine continues right to Moose lake with the exception of two or three miles of light poplar at the eastern arm of the lake. In most places the jackpine is small and scrubby or not fit for anything but two by four scantling. But for ten miles around the spot on the enclosed map, marked 'Hogback ridge' the timber attains a very fair size, fifteen to twenty inches in diameter and straight and tall.

This I think describes the country traversed pretty well. I was gone three weeks and was almost driven out by the flies. They had bitten me so badly I was afraid of poisoning. Mr. Boyd and the Indian guide made a rather foolhardy attempt to recover the horses, resulting in their having to walk eighty or more miles without food or fire. I was left at Moose lake with no idea what had happened to them for six and a half days.

Respectfully submitted,

GEORGE A. MULLOY.

No 32.

REPORT OF GEORGE A. MULLOY.

Fort Smith, Alberta, December 28, 1911.

R. H. Campbell, Esq.,
Director of Forestry,
Ottawa.

Sir,—I have to report the work done by the trapper, Peter McCallum, and myself since September last. We have been for three months or more in the northern bison range, and therefore I have not had an opportunity of communicating with you more frequently.

On September 16 last, after putting up a supply of fish for the dogs at Gravel point, we loaded up our skiff with supplies and started down the Slave river. Our intention was to make a small catch of fish at Grand Detour, a big bend in the river some thirty-five miles down stream, so that we would not have to return for dog-feed before the snow came. From this point we were to strike west to the Little Buffalo river and up Bear creek, which enters the Little Buffalo at this point. McCallum knew there was an old shack on Bear creek and our intention was to use this as a storehouse and head-camp while in this district. How these plans worked remains to be told.

As was the case with many others who waited too long to lay in their stock of fish for the winter, we were unsuccessful in this second, or supplementary, catch at Grand Detour. The last, or big run of 'connies' never came. Disappointed and left with four dogs to feed until snow came, we decided to push on overland to the Little Buffalo river.

Earlier in the year the crossing of this portage with a boat is much simplified by using several long narrow sloughs which nearly connect these two rivers at this point. But we found the sloughs nearly dried up and the dragging of a heavy boat for miles overland wholly impracticable. So we concluded that our best plan was to hitch the dogs to the sled and drag the sled and as many supplies as possible over dry land, leaving a cache on the bank of the Slave river. This was killing work, as we had to assist the dogs and incidentally hunt feed for them, wading in icy water after musk-rats, shooting chickens and snaring rabbits—any and every means to get enough feed for those dogs.

At last, after much exploring, we find the shack on Bear creek and take possession. Some moose hunters had pulled the whole side of it out for wood, and it was in a pretty bad condition. But we thought it would save time to repair it.

Now commenced one of the most difficult games I ever had a hand in—trying to carry on our work of exploring the country and repairing the shack and at the same time provide meat enough for the dogs. McCallum killed a large moose and I shot a bear. This aided us materially, but the meat disappeared very rapidly and towards the end of our stay we were reduced to snaring rabbits for dog feed. Thus you see, sir, I am not very much in favour of dogs as a means of locomotion. However, the winter has just set in and their usefulness will be put to a good test. But to continue. Of course, we have made many excursions and trips both far and near so that I will be able to give you a good description of the country and a reasonably accurate sketch. The long trips, of course, have been made only since the snow came. The breaking of a trail is slow work and is rather hard work, but once broken, a trail can be used all winter, as the dogs have a solid footing and travelling for man with trail-snowshoes is not a very difficult matter. Our main trail is forty to fifty miles long and runs westwards from Bear creek, crossing what appears to me to be the southern end of this northern bison range. We have not been able to come up with any of the herds as yet, as they can travel very fast and far, but, of course, their tracks in the snow told us all we wished to know. Later, however, when the snow on the huge open hay-meadows or prairies becomes solid and we are not forced to wade through snow and grass to our waists, we will be able to travel more quickly and keep a closer watch on any band we encounter. All the tracks we have seen have been made by bison headed to the north or Resolution end of the range, except seven which were travelling in the opposite direction. One of the trails was quite hard and well defined, although covered several inches deep with fresh snow, and McCallum thinks there were forty to fifty in the band.

Now, with reference to the wolves, I would have preferred, of course, to give some visible evidence of the work done and been able to turn over at least a few of these animals' pelts as proof that we were able to catch them, but it will be probably more satisfactory to you to hear that we saw very few tracks in the locality, and these have almost invariably been those of wolves which have later crossed the Slave river on their way to the caribou territory. This has one exception. We did discover that one large wolf had been following a herd of seven bison (those referred to above) but as they did not show any signs of fright or agitation they evidently were not afraid of him.

We have placed baits and traps on all our trails except where they approach or cross any other trail. These have to be visited very often, as a fresh fall of snow might cover up the track of any poisoned animal, and, although we have caught and killed many birds and rabbits, no wolf has come near our trail or traps. This seems rather discouraging, but better results may be hoped for later in the winter, when the wolf, with many others of the meat-loving animals, cannot catch the rabbits which are very numerous and which fall an easy prey to any of the carnivorous tribe.

At the outset of my description of the territory covered in the last three months I wish to correct a statement or impression I seem to have given you in one of my earlier reports. The timber along the Slave river is splendid. My error may be accounted for when I say that the trail we followed in June last approaches the banks at only a few places, and therefore one does not get a favourable impression at first. But since we have navigated the river in a small boat I have had a better chance of inspecting it. The river all the way to Grand Detour is bordered by a heavy belt or fringe of spruce, varying from one mile or more to a few yards in width. The islands especially are very heavily timbered. One big island which is seven to eight miles long and two miles wide at its widest point, and on which the Hudson's Bay Company, has a saw-mill at present, is densely covered with large spruce. In many places the trees are three feet in diameter, and standing so thickly that no underbrush will grow. This is a sample of all the islands as far as Grand Detour, and there are many and all very large.

The country lying between the Little Buffalo river and the Slave is practically the same throughout its entire length. We have crossed it in many places and in coming to headquarters this time we followed some Indians' trapping trails which wound in and out all over the country, making our trip across country very tedious and long, but allowing us to get a good idea of the country. This strip of country is invariably flat. Long narrow sloughs or hay-meadows are sandwiched in between long narrow strips of timber, both running parallel to the big river. The timber, which is spruce and poplar mixed, decreased in size and quantity as the distance increases from either of the rivers. Down at Grand Detour, however, the sloughs become immense hay-meadows, varying from half a mile to two miles in width and stretching northwest as far as the eye can see. The timber here becomes almost a negative quantity, with the exception of the belt along the two rivers and a few scattered islands and isolated strips. This immense hay-slough or prairie, as it is falsely called by some people here, is said to run all the way to Resolution, broken only occasionally by clumps of alders and small spruce thickets. This country, I should say, would make excellent grazing or ranch land, as it is covered by a dense growth of long grass.

Bear creek enters the Little Buffalo river some four or five miles south of the portage to Grand Detour. It is a small stream about five yards wide at the mouth, and inclined to be swift, especially so seven or eight miles from the mouth where it passes through some rocky country. Its course is, generally, from the southwest, and its banks are thickly clothed with good-sized spruce. The rocky country some eight miles west on the Bear creek is a continuation of the outcropping at Salt mountain, I am sure, because it presents the same appearance and runs in a southeasterly direction, gradually approaching the Little Buffalo river. In fact this height of land continues on across Bear creek for some distance and forms the footing, or base, of the big flat buffalo range to the north. It is very rocky and precipitous in places, especially at Bear creek, but in other places is covered with an excellent growth of poplar. However, on the south side of Bear creek, immense old brulés are encountered. These, I am pleased to say, are invariably covered with seedlings and small trees.

To the north of Bear creek, as I have mentioned, lies the great buffalo range. It is the same kind of country as we encountered immediately to the east of the Little Buffalo. Covered with long, rank grass and broken only occasionally by islands and strips of small spruce and poplar, it stretches as far as the eye can see. Occasionally sloughs occur, but these are insignificant compared with the immense amount of dry hay-land.

The sketch I am making is not as yet completed and, as I wish to get this off by the next mail, which leaves on January 1, I will enclose it under separate cover.

We are making a long trip into the southern range in a day or so, as we have cause to suspect some fur hunters in that district. I will let you know the outcome of it later.

Respectfully submitted,

GEORGE A. MULLOY.

No. 33.

REPORT OF GEORGE A. MULLOY.

FORT SMITH, ALBERTA, January 11, 1912.

R. H. CAMPBELL, Esq.,
Director of Forestry,
Ottawa.

SIR,—As I intimated in my last report we have had a trip into the country west of Fort Smith and north of Moose lake. This trip was to ascertain whether the suspicions caused by the action of some Fort Smith Indians were groundless or not, and also to continue our work in connection with the wood bison.

Contrary to expectations, we found nothing that would lead us to suppose any buffalo had been killed, although we searched each camping-place and cache. But, although the Indians who were trapping on this trail when questioned by Mr. Bell had said that no buffalo tracks had been seen and that wolves were very thick, we found just the opposite to be the case. Only one wolf track was seen and that an old one, while the buffalo seem to use this country as a range all year round. Why the Indians made misleading statements is hard to account for.

While our trip lasted only a week, we were able to cover a considerable distance in that time as the trapping trail was hard and firm, although in some places completely drifted in. The trail leads west and south from a point on the trail from Fort Smith to Salt river settlement and holds this general southwestern course until nearly north of Moose lake, where it swings to the northwest. It seems to be an old trail used by trappers for many years, but I should say it was impracticable for summer use; it for miles follows big sloughs and country which is more or less inundated in the summer months.

The first part of the country going westwards is simply a continuation of the Fort Smith type of land, namely, flat, sandy, and covered with a good growth of jackpine, here and there broken by open patches covered with alders. This stretches for four or five miles and then changes to what in this country is called prairie. This is not really prairie, although it is flat and covered with a short fine grass. I would call it rather scrub country, as everywhere waist-high alders and red willows cover the ground. This runs right to the bank of the Salt river, a distance of seven or eight miles.

Crossing Salt river, which is here thirty yards or so wide, we came in view of the Salt mountain range of hills, some four or five miles away, across a big slough or shallow lake. This latter runs to the north along the foot-hills. The range of hills here is fully as high as at Salt Mountain proper but is not rocky and precipitous. It slopes up gently and is covered thickly with jackpine and an undergrowth of small poplar. The jackpine is of good size, ten inches diameter being the average of the larger trees, but the poplar is of no account at all. Farther on, however, say four or five miles, as the country slopes gradually downwards and westwards, poplar and spruce predominate. Large hay-meadows and sloughs make their appearance, bordered by densely timbered spruce muskegs. Here it is, on this western slope of this range, that the buffalo have their habitat. In fact, I think that we will eventually find that, as this range of hills bisects the country north and south at every point I have visited it, the buffalo use the western slope of it for both winter and summer feeding, probably using it also as a connecting link between the two bands, the northern or Resolution band and the southern or Peace river band.

Westward from here (ten or twelve miles from the Salt river) begins a country which is hard to describe as the cause of its condition is not readily apparent. It is practically flat until the foot-hills of the Caribou mountains are reached, and although very swampy in places it is not a muskeg. Evidences of forest fires can be found if looked for, but the subsequent fallen timber has long ago rotted away. The country is now clothed with a dense growth of small spruce and a forest of dry small poles. It is a great moose country, and this may possibly account for its condition, as moose hunters as a rule are not very careful of their camp-fires. I climbed to the top of a tall, rocky promontory which juts out from the west, just north of Moose lake, and saw that this kind of country stretches south to the big timber surrounding Moose lake, and north as far as the eye could see, following the course of the Little Buffalo, which here winds northward to its source in some small lakes. Of course patches and strips of big timber are scattered here and there, almost invariably spruce, but they are only islands in a sea of small second-growth spruce.

I have not had time to prepare a sketch-map as we are almost continually on the trail or getting ready for the next trip, but hope to be able to do so in the near future.

I might add, in conclusion, that we saw where Indians had followed buffalo tracks in many places, but were unable to ascertain whether a kill had been made or not. This will have to be done in the spring when the snow goes. The wolves, however, seem neither to be very numerous nor to have any inordinate desire for buffalo meat. We are continuing, however, to pursue them as vigorously as possible.

Respectfully submitted,

GEO. A. MULLOY.

No. 34.

REPORT OF GEORGE A. MULLOY.

Fort Smith, Alberta, March 1, 1912.

R. H. Campbell, Esq.,
Director of Forestry,
Ottawa.

Sir,—I have to report work done by the trapper, P. McCallum, and myself since last report in January.

As I intimated in my last letter, we returned to our trapping operations in the Bear creek and Little Buffalo River district. This has been singularly unsuccessful, owing, most probably, to the absence of any wolves in that part of the country. Foxes, however, were very plentiful and why none of them took our bait or got into our traps is a matter which the trapper has been trying to explain to me. Foxes and wolves are about the same, in regard to trapping operations; at least the same methods are employed to catch both, and the natural deduction is that something was wrong with our method of trapping. The fact remains that no wolves were caught or killed, and, as no new buffalo tracks were seen, we decided to quit operations in that locality.

For some time Mr. Bell has wished us to make a trip into that district lying between the Peace river and Slave river near the junction, the object being both to determine whether there were any buffalo there and to get a description of the country. On February 20 we started up the river with a guide and extra team of dogs. Our intention was to follow the pack trail on the river until we came to the big bend in the river some fifty miles or so south of Smith's Landing. Here, starting from the most westward part of the bend, we could cut a trail through to the Peace river following a southwest course as nearly as possible. This was done by means of the compass and, with everything favourable, should take us to the most eastward point of the big bend on the Peace river, somewhat below Peace Point. In all this we were very successful, landing at the nose of the bend on February 24.

No signs of buffalo, however, were seen at any part of the twenty-five to thirty miles of trail which we were forced to cut through this country. Alexis, the guide, however, tells me that there is quite a band, 50 to 100 of these animals, some miles north of here. This is where Mr. Radford shot his specimen, and the guide has a trapping trail through or near their winter feeding ground.

Of our elusive enemies, the wolves, not a track was seen.

Now, I have been talking over the situation with Mr. Bell, and especially his plan for the localization or rounding up of the buffalo in a certain district, and most heartily concur with his ideas. You will see from my description of the country appended hereto that there would be plenty of feed and shelter for them and their protection would be only a simple matter. As it is, since they are scattered so widely up and down the country, any adequate measures for their protection would necessarily be very expensive.

Trapping or poisoning operations have to be carried on in one part of the country at a time. This would be all right if we could get close to a big band of buffalo and kill any or all the wolves that came to molest them. But as they are scattered so widely it means that we are neglecting ninety per cent of the animals to do ten per cent of them some doubtful good. Therefore, sir, you can see why Mr. Bell and I have decided that the best interest of the buffalo can be served by making trips of inspection here and there and everywhere through the country.

It is also of great importance to determine a thing the determination of which, to most people up here, seems an impossibility, and which up to the time of writing I have not had much opportunity to determine, *i.e.,* the approximate number of buffalo in each locality. Of course I know that upon this point will hinge the advisability of further expenditure in regard to their protection, and tripping everywhere through the country is the only means of obtaining this information. It can never be obtained by localized trapping operations, as the trapper McCallum expected would be the case.

I will now describe as accurately as I can the country encountered on our Peace river trip.

The timber south of Smith's Landing along the Slave river as far as the big bend is not nearly as good as that in the lower river below Fort Smith, both in regard to individual size and quantity. Each point has its big bluff of spruce. This timber is fair in size, ten to fifteen inches in diameter. Every tree, however, is limbed nearly to the butt owing to their exposed nature. The main bank of the river is clothed with small black poplar of no commercial value. Islands, however, are numerous and these one and all are densely wooded with good spruce.

The bank of the big bend is practically the same, big bluffs of spruce alternating with long stretches of small poplar.

Striking inland from the river in a southwest direction, high lands covered with a mixed growth of poplar and spruce are encountered. The spruce is very good and continues so until the bank of a small river is encountered. This stream is of fair size, thirty yards wide, with high, steep banks. It has numerous names, or rather, there seems to be a discussion which is the right one. However, the Indian told us that it comes out or empties into the big river at Le Butte, a point twelve miles above the northern end of the big bend. From a well informed riverman I also have the information that it is open at the other end through some sloughs into the mouth of the Peace river, and, at high water, the water flows from the Peace river directly through this channel into the Slave river. However at this point, three miles southwest from the Slave, it comes from the south and appears to be very navigable for small craft.

The west bank of this small river is well wooded, with black, or balsam, poplar and spruce, but, as is the case with the timber on every stream in this country, it soon diminishes in size and quantity as the distance inland is increased. Hay-sloughs are next encountered surrounded by dense growths of small spruce, but this soon gives way to scrub prairie. This, in fact, is the character of the country until half-way to the Peace river, small flat openings covered with knee-high scrub and surrounded with thin fringes of small dense spruce. Here and there, to the south or north, rolling land is seen covered with a scattered growth of poplar. The timber is of no commercial value.

For the rest of the distance there is nothing but brulé. An enormous fire has destroyed the whole vegetable growth of the country. This reaches in places to the bank of the Peace river itself. This fire, which occurred some ten years ago, at least, seems to have started from the Peace river side, and to have swept eastward until practically all the timber of any value was consumed. The region five to ten miles back from the Peace is hilly and sandy, and is now covered with a forest of fire-blackened big jackpine poles. On the banks of the Peace, however, the worst damage has been done. The spruce there was of enormous size and extended a mile or so back from the river. Just where we reached the river there is a very large strip of timber that has been spared. But to the east, north and south the fire has left nothing but an impenetrable brulé.

The soil throughout the central district is a good clay loam, but on the jackpine hills nothing but sand has been left by the fire.

Our next trip will be a joint patrol with the mounted police, and I hope will be more enlightening as far as the buffalo are concerned.

Respectfully submitted,

GEO. A. MULLOY.

No. 35.

LETTER OF A. J. BELL.

Office of the Dominion Government Agent,
Fort Smith, Alberta, January 16, 1912.

R. H. Campbell, Esq.,
Directory of Forestry,
Ottawa.

Sir,—I beg to submit for your consideration, the following report on the protection of the wood bison in the neighbourhood of the Great Slave river.

The protection of the bison is rendered difficult owing to the vast area over which the various small herds wander, and the distance from posts where supplies can be secured; these points make the efforts of the appointed herders of little real value, owing to the length of time taken in travelling between the base of supplies and the ever moving herds.

If it were possible to centralize these herds the annual expenditure would be greatly reduced and more effective protection afforded them.

At the junction of the Peace with the Great Slave river there is a district much frequented by bison, both in the summer and the winter months. A line drawn eastwards from Peace Point, upon the Peace river, would intersect the Great Slave river about twenty miles below the junction with the Peace.

If a suitable fence were constructed along this line, a distance approximately twenty-five to thirty miles, the bison could gradually be worked from the north into this peninsula where there would be ample range for a very large herd for a number of years.

Should the bison attempt to leave the range in the winter by crossing one of the rivers upon the ice, the herder (whose business it should be to patrol the water front) could follow and turn them back. It is not probable, however, that they would attempt to do this.

There are many old bulls who have been driven out of the herds by younger ones. These animals, being alone, are often killed by wolves. They are useless to the main herds, and, as they are as a rule of immense size, would make valuable trophies for museums or public buildings. They could be killed, skinned, and the bones preserved for articulation, the whole forming a few packages which could easily be shipped to the Department.

I beg to enclose an estimate of cost for the erection of fence and buildings, and for the moving of the northern and central herds to the southern end of the district.

Respectfully submitted,

A. J. BELL,
Agent.

(Memo re Cost of Fence, &c.)

ESTIMATE OF COST NECESSARY FOR THE MOVING SOUTH AND ENCLOSURE OF THE BISON IN FORT SMITH DISTRICT.

Country to be enclosed.—From Peace Point on the Peace river to a point upon the Slave river, about twenty-five miles eastwards.

Area within proposed enclosure.—125 square miles.

Nature of country.—Numerous level prairies, some jackpine ridges and poplar bluffs, a few hay-sloughs, and a small percentage of muskeg lands. A fringe of good spruce along the river banks.

MOVING THE HERDS SOUTH.

Three parties starting simultaneously from a point about sixty miles west of the Grand Detour upon the Slave river (thirty-five miles below Fort Smith), and about an equal distance east of Buffalo lake, could pick up the trail of the herd which frequents that district, and move south a few miles abreast. They should follow the buffalo trails, which are well defined and followed regularly by these animals in their migrations. These trails follow the high ridges, of which there are but a few in that country.

The time of year chosen for this work should be the middle of April.

Three Indians and three white men (acquainted with the country) should be sufficient for this work. They would need a pack-horse for each party. Wages, $50 per month with rations, the cost (landed) of which would amount to $25 per month.

Cost of pack-horses, $1 per day. The Department has one pack-horse now on hand. Two months' steady work should sweep the country as far as Peace Point.

ERECTION OF FENCE.

This work should be commenced simultaneously from the east and west ends.

Jackpine and tamarack posts can be obtained in the locality, cost 20 cents each; number required, about 10,000. Cost of labour necessary for erection of fence, $50 per mile.

Cost of wire, 7 cents per lb. additional to the cost at Edmonton. It is estimated that five wires would be used.

Erection of two shacks within enclosure, at $150 each, $300.

Preliminary survey and 'blazing' of fence line, $400.

RECAPITULATION OF COST.

Moving the bison south	$1,080 00
Cost of fence posts	2,000 00
Cost of wire, 125 miles	(?)
Erection of fence	1,250 00
Survey and 'blazing' fence line	500 00
Erection of two herders' shacks. (These shacks to be erected at either end of enclosure)	300 00

All of which is respectfully submitted,

A. J. BELL,
Agent.

No. 36.

REPORT ON A SHIPMENT OF REINDEER.

DEPARTMENT OF THE INTERIOR,
FORESTRY BRANCH,
OTTAWA, October 25, 1911.

R. H. CAMPBELL, Esq.,
Director of Forestry,
Ottawa.

SIR,—I have the honour to submit herewith a report in connection with a shipment of reindeer from St. Anthony, Newfoundland, to Fort Smith, Alberta, the details of which were carried out almost entirely under my personal supervision.

In order to convey a correct understanding of the reasons for undertaking to establish a herd of domesticated reindeer in the sub-Arctic regions of Canada it will be necessary to recite, briefly, the circumstances which led up to it.

The earliest recorded attempt to domesticate reindeer on this continent is that of the United States government which, about 1892, imported a herd of Siberian deer to Alaska for that purpose. Several small herds have since been imported and, as the result of careful and intelligent handling, there are now some 15,000 domesticated reindeer in Alaska. The deer are used for practically all the purposes for which domestic cattle may be used and are, in addition, very useful for transportation purposes. The problem of transportation is, aside from the severity of the weather, the most serious with which dwellers in the Arctic regions have to deal. The cost of grain and hay, neither of which is grown in any considerable quantity, precludes the use of horses or cattle for transportation purposes and, prior to the introduction of reindeer, dogs were used almost entirely. While Eskimo or husky dogs made excellent beasts of burden, their usefulness is seriously impaired by the necessity of hauling with them sufficient fish, or other food, for their own subsistence. This seriously limits the sphere of a dog's usefulness, as on long trips dogs can haul little, if any, load beyond their own food supply. Reindeer, on the other hand, while quite as hardy as the best train dogs and able to haul somewhat larger loads, find their own subsistence in the moss which covers practically all of the sub-Arctic region. No matter how cold the weather, or how deep the snow, the deer can paw their way down to the moss and thus keep themselves in good condition on the longest and roughest trips. Another point in favour of deer is that, should misfortune overtake a party of Arctic travellers and it becomes necessary to kill the transport animals for food, the flesh of the deer is palatable and nourishing, while only dire necessity would impel anyone to use dogs for food.

It seems to have been the idea of the United States government that the establishment of large herds of domesticated reindeer in Alaska would be a long step in the direction of solving the transportation problem of that district and, in addition, would to a considerable extent provide a food supply for the natives who otherwise would from time to time become charges upon the public treasury.

This experiment by the United States government was followed with great interest by many Canadians who were interested in the development of our northern territories, and particularly by Dr. W. T. Grenfell, who, in connection with his medical missionary work on the Labrador coast, found himself confronted by practically the same conditions that obtained in Alaska, viz.: severe climate, absence of means of winter transportation other than dogs, and scarcity of food supply for natives and fishermen during periods of unusually severe weather.

At Dr. Grenfell's request the Dominion government in 1907 purchased a herd of some 300 Norwegian reindeer. These were handed over to Dr. Grenfell to be used by him in connection with his work. It was originally intended that the herd should be established on the Canadian Labrador coast, but Dr. Grenfell finally decided that his mission station at St. Anthony, on the northeast coast of Newfoundland, was a more suitable place for the experiment. There is an abundance of reindeer moss at, or near, St. Anthony. the climate is in all respects suitable and, should occasion require it, the deer can readily be shipped from there to any desired point on the Labrador coast as conveniently as from the point first selected.

Dr. Grenfell's experiment has proved successful from the start and, from the small beginning above referred to, he now has over 1,200 deer. A considerable number of stags and barren does have been killed for food, and there have been the usual unavoidable losses by death and accident. He reported in May, 1911, that the meat is excellent and the skins valuable and that, in his opinion, reindeer will in the future be as valuable in Labrador as in Alaska and will afford an export industry of meat from a district where it is never probable that wheat, corn or other cereals can be profitably produced.

During the summer of 1910, His Excellency the Governor General, Earl Grey, visited Dr. Grenfell's mission station on his return journey from Hudson Bay. His Excellency was greatly interested in the reindeer experiment, and, having just seen a considerable part of sub-Arctic Canada, was impressed with the desirability of further extending the experiment by the establishment of herds in portions of the Northwest Territories. His Excellency subsequently discussed the question with Hon. Mr. Oliver, then Minister of the Interior, and some correspondence ensued between Mr. Oliver and Dr. Grenfell which resulted in Dr. Grenfell agreeing to supply a limited number of deer from his herd at what the animals had actually cost him.

At this stage the correspondence was handed to you with instructions from Hon. Mr. Oliver to report upon the feasibility of locating a suitable reindeer range in the vicinity of Fort Smith, on the Slave river at the extreme northern boundary of Alberta. You submitted a partial report on 22nd May, 1911, but, with the information then available, were not able to make any definite recommendation. Subsequently, however, you called upon Dr. Grenfell, at Toronto, and discussed the whole question thoroughly with the result that, on 9th June. Dr. Grenfell in a letter addressed to you, submitted a detailed proposal covering the whole question and agreeing to supply deer, moss sufficient for the journey, and experienced herders to take charge of the deer throughout the trip and to remain with them for a sufficient time to permit of others being trained to succeed them. This offer was accepted, and on 21st June, 1911, authority was given to complete the purchase and to arrange for the shipment.

At about this time you were called away from Ottawa on business and the further arrangements were entrusted to me. The first step was to ratify the provisional arrangement with Dr. Grenfell and, accordingly, on 26th June he was informed that the Department would accept his offer to supply fifty reindeer at the rate of $51.30 each. Dr. Grenfell was further informed that three trained deer dogs would be required and a supply of deer moss sufficient for a journey of thirty days; also that the Department would require two herders and one apprentice. The salary suggested for the herders was not exceeding $500 a year each and not exceeding $30 per month for the apprentice. An arrangement was made with the Department of Marine and Fisheries to have one of the government steamers call at St. Anthony and transport the deer to Quebec, from which point they would be taken by rail to a point on the Canadian Northern railway about sixty miles north of Edmonton. Arrangements for transportation beyond Edmonton were entrusted to Mr. J. W. McLaggan, Chief Fire Ranger for that district, who was instructed to have scows built and crews engaged to take the deer from Athabaska Landing to Fort Smith. I was authorized to go to

Montreal and Quebec to arrange necessary details in connection with the shipment by ship and rail and to go to St. Anthony to receive the deer and to accompany them at least as far as Edmonton or Athabaska Landing.

I went to Montreal and Quebec between August 18 and 22, arranged all necessary details, and again left on the 5th September for North Sydney, Nova Scotia, to meet the ship, it having been arranged that she would call at that port for coal after loading the deer at St. Anthony. Owing to pressure of work and to the infrequent trips made by the only steamer calling regularly at St. Anthony I was unable to reach that point in time to superintend the loading of the deer.

It had been arranged with the Department of Marine and Fisheries that the G. SS. *Montmagny* would call at St. Anthony for the deer between 25th August and 10th September, but, as the ship was then delivering lighthouse supplies in the Gulf of St. Lawrence, it was impossible to fix a definite date much in advance. The *Montmagny* reached St. Anthony on the evening of the 6th September, loaded the deer on the 7th, and sailed for North Sydney on the 8th. She was delayed by fog and bad weather and did not arrive at North Sydney until the night of the 12th. I went on board on the morning of the 13th, and we sailed at 9 p.m., on the same date.

I found the deer—six stags, four oxen and forty does—all apparently in good condition. They were in comfortable, roomy pens, six in all, in the forward part of the boat, 'tween decks directly under the main fore hatch. The air was fairly cool and the ventilation, with the hatch open, was excellent. Nathaniel Gear, the chief ranger, informed me that there had been little difficulty in loading the deer and that none had been injured so far as he could ascertain. Mr. and Mrs. Gear had been given cabin accommodation, while the other herders were treated as deck passengers and messed with the crew. I found that four, instead of three, herders had been sent by Dr. Grenfell, but Gear explained that the fourth man, Wroughton Vickers, was returning to his home near Toronto and had been sent with the deer to assist in caring for them on board ship and in transferring them to the cars at Quebec. Dr. Grenfell seems to have assumed that the Department, in return for Vickers' services, would be willing to pay for his meals on the ship and his railway fare from Quebec to Montreal. I may add, in order to clear this matter up, that Vickers made himself generally useful during the trip and I paid for his meals and railway fare; he left us at Montreal.

I had not been furnished with an invoice of the goods supplied by Dr. Grenfell, that having been sent direct to Ottawa, but I examined as carefully as possible all the articles that could be seen and satisfied myself from the statements of the chief herder that everything had been supplied in accordance with the agreement. I have since verified this by reference to the invoice. The moss for the deer was packed in bags and stored in such manner as to make it difficult to count the number of bags or to estimate the weight; experience proved, however, that sufficient had been supplied to last for at least one month.

Upon leaving North Sydney I was informed by the ship's officers that, instead of proceeding directly to Quebec, the vessel was under orders to stop at Cheticamp, a village on the north coast of Cape Breton island, to take on board and convey to Montreal a cargo of powdered gypsum. So far as any of us knew at that time the only objection that could be made to this was the delay, but subsequent experience proved pretty conclusively that the dust from the gypsum was injurious to the deer. We reached Cheticamp at 8 a.m. on September 14 and immediately commenced taking on cargo, which was continued without interruption until 2 p.m. of the 15th. The vessel lay with her starboard side to the wharf and the bulk of the cargo was taken on through the fore hatch. Owing to the gypsum dust it became necessary to close the ports on the starboard side and to hang tarpaulins in front of the three deer pens on that side of the vessel, but in spite of all precautions the air became very hot and the dust in those pens was stifling. Some of the deer were noticed licking up the dust which had settled on their pens and watering troughs. During the night of the 14th-15th one doe died and on the following day (15th) two more were found to be sick. The death roll shows the following:—

September 15.—1 doe died.
" 16.—2 does died.
" 17.—1 doe died.
" 18.—2 does died.
" 22.—1 doe died.
" 25.—1 stag died.
" 29.—1 doe died.

Total.... 9

The first seven deaths were from the three pens on the starboard side of the vessel, where the air was closest and the dust most stifling. The symptoms were practically the same in each case, very laboured abdominal breathing and, as death approached, a painful gasping for breath and violent muscular spasms. From close observation of all these cases and from opinions given by veterinary surgeons who had seen the animals, or to whom the symptoms had been described by me, I am confident that at least seven, and probably eight, of the nine deaths were due directly to inhalation of gypsum dust. Since my return to Ottawa I have discussed this matter with Dr. J. G. Rutherford, Veterinary Director General, who confirms my opinion. Dr. Rutherford describes the disease as 'traumatic pneumonia,' due to irritation from inhaling gypsum dust. It is very much to be regretted that the success of this experimental shipment should have been jeopardized and, as the result shows, seriously impaired, by avoidable causes. As soon as the loading of gypsum was finished the ports and hatch were opened and the pens thoroughly cleaned. Small watering troughs were built and placed in each pen and kept constantly supplied with fresh water. One of the herders was kept constantly on duty so that special attention might be given to any animal showing signs of disease. The officers of the ship were very considerate and did everything in their power to assist in caring for the deer.

We left Cheticamp at 2 p.m. of the 15th September and, after an uneventful passage, reached Quebec at 9 a.m. of the 18th. Arrangements had previously been made with the Canadian Pacific Railway Company for transportation of the herders, deer and baggage from Quebec to Edmonton, but I found instructions awaiting me cancelling this arrangement in part. Under the new arrangement shipment was to be made via the Canadian Pacific to Port Arthur and via the Canadian Northern from Port Arthur to the end of the steel on the uncompleted line from Edmonton to Athabaska Landing. I at once got into communication with the officers of the railway companies and arranged to have cars placed on the tracks at the dock in time to unload the deer at high tide—about 2 o'clock p.m. I was informed that, if the loading was completed in time, shipment would be made by the regular train at 7 p.m.

My time was very fully occupied during the morning in passing the shipment through Customs, securing a certificate from Dr. Couture, a veterinary inspector in the employ of the Department of Agriculture, and in purchasing provisions and other supplies required for the long journey by rail. These details occupied considerable time and entailed a good deal of running about, but they were finally arranged and I got back to the ship shortly before two o'clock in the afternoon.

TRANSFER FROM SHIP TO CARS.

Owing to the necessity for unloading the deer during high tide when the deck of the vessel was approximately level with the dock, it was impossible to unload directly into the cars and, moreover, it was impracticable to bring the cars very close to the ship. There was a vacant warehouse on the dock just opposite the ship and, through the courtesy of the harbour officials, it was arranged to turn the deer into this until all were off the ship and then to load into the cars from the opposite side of the warehouse. The does and stags were taken from their pens and placed in a large cage which was then hoisted by the donkey engine to the dock, from four to six deer being carried at each load. From the spot where the cages were landed on the dock to the door of the warehouse was about thirty feet and ropes were stretched so as to form a lane from the cage to the door. The ship's crew and spectators were used to form a line outside the ropes so that the deer were readily induced to trot into the warehouse. Mr. Gear and the other herders placed the deer in the cage and released them from it and their work was both hard and unpleasant, as the animals were greatly excited and in some cases fought viciously. The ox deer could not be hoisted in the cage on account of the size of their horns. (I neglected to say that the stags had been dehorned at St. Anthony in order to facilitate handling and to prevent their injuring one another. The horns of the does are much smaller and do not seriously interfere with handling.) Each ox deer was hoisted singly in slings and then led into the warehouse. The oxen are broken to drive and handle and we had no trouble with them at any stage.

It took about two hours to land all the deer from the ship and during this time the ship's carpenter and others were employed in building partitions in the stock cars, using the lumber that had been used in the pens on the ship. The idea of partitions in the cars was to permit the doors to be opened without any risk of the animals escaping; a further advantage was that it permitted of the use of the space between the doors for storing moss and bedding.

Our real troubles began when we attempted to load the deer into the cars. A passenger gangway, with sides about thirty inches high was run from the door of the warehouse to the first car and we first led a stag up this inclined way. He went about half-way up and then suddenly jumped the railing and landed on the dock among the spectators, causing a rapid scattering. Several breaks of this sort were made, but, by climbing along the outside of the gangway and keeping the deers' heads down, we were generally able to prevent any getting away. One stag, however, put up a vicious fight, using both horns and hoofs, and was finally carried on board fighting all the way. One of the herders was somewhat injured in the fracas, but fortunately his injury proved not to be serious. The does were easier to manage but all had to be led into the cars. It was not considered safe to drive them, as they might have injured themselves by jumping over the gangway railing and possibly might have escaped altogether.

The loading of the deer was completed about six o'clock and then a very busy hour was spent in loading the moss and baggage. All was completed, however, about seven o'clock and the cars were moved away to the freight yard where the train was being made up.

The tourist car in which the herders were to travel had been placed on a siding near the dock and as the provisions and other supplies purchased by me during the morning were delivered they were placed on board and the car kept locked. The last of these supplies was delivered about six o'clock and I then placed Mrs. Gear, the wife of the chief herder, in charge of the car, while Mr. Gear and the other herders remained with the deer cars. I then drove to the railway station where I completed arrangements for the shipment, made out and signed a bill of lading and procured tickets covering the transportation of myself and the herders. We left Quebec at 7.30 p.m. very tired but thankful that there had been no serious accident or delay and that in spite of the many things to be done and the short time to do them in we had been able to accomplish all that we had set out to do, without delaying the shipment in any way.

I feel that I should not close this part of my report without expressing my appreciation of the kindness of the officers and crew of the G. SS. *Montmagny,* who not only assisted in unloading the vessel, which was probably their duty, but who also very materially assisted us in handling the deer from the dock to the cars and in preparing the pens in the cars. Without their voluntary assistance we would hardly have been able to get loaded and away within one day.

I am also greatly indebted to Mr. G. J. O'Dowd, freight agent of the Canadian Pacific railway at Quebec, who personally supervised the placing of the cars at the most convenient points and who remained on the dock constantly from shortly after noon until the last car was loaded.

JOURNEY FROM QUEBEC TO EDMONTON.

We arrived at Mile End, Montreal, at 4.30 a.m., of the 20th September, and here learned that we would not pass through Ottawa as had been previously arranged. I accordingly wired you, suggesting that you meet us at Smith's Falls, which you did in the afternoon. Two deer which had been sick the previous day had died during the night. We watered and fed the deer during the stop at Mile End, and, later, while stopping at Outremont, the herders went into the stock cars and remained there practically all day employed in putting up partitions, arranging water troughs, &c., so as to make the deer as comfortable as possible. The cars supplied us were the most modern form of stock cars, but the facilities for watering and feeding, while no doubt admirable for cattle or horses, were entirely unsuitable for deer. Owing to the height of the troughs and hay-racks it was impossible for the deer to reach up to them and we therefore utilized the small watering troughs built by the ship's carpenter. These troughs were fastened to the floor and were kept filled from water-barrels which had been purchased at Quebec and placed in each car. Moss was fed by being placed in a ridge along one side of the car; doubtless some was wasted by being trampled upon, but the deer seemed to get most of it.

Our equipment consisted of one tourist car, three stock cars for the deer and one stock car for feed, baggage and dogs. We left Quebec with forty-six deer, divided among the three cars as follows:—

Car No. 1—	6 stags, 4 oxen, 1 doe	= 11
Car No. 2—	16 does	= 16
Car No. 3—	19 does	= 19
Total..		46

In the baggage car we had most of the personal baggage of the herders, a supply of moss sufficient to last some three weeks, a supply of hay for bedding, and three Lapland deer dogs.

You joined us at Smith's Falls and accompanied us as far as Chalk river and personally saw that the conditions were as satisfactory as it was possible to make them.

At North Bay, on the 20th September, it became necessary to purchase an additional supply of hay for bedding in order to keep the cars clean, as a good deal of water splashed out from the barrels and troughs and made the floors sloppy. On this day I discovered that one of the stags had an abscess in his throat and other symptoms of illness similar to the does that had died previously. All the other deer were well at this time except one doe that had been sick ever since we left Quebec. I may add that both of these animals finally died, the doe on the 22nd and the stag on the 26th September.

We arrived at Port Arthur about noon of the 22nd September, where we were transferred to the Canadian Northern Railway. The deer had been billed through to a point north of Edmonton, so I had no difficulty about them, but, as our own tickets ran out at Port Arthur, I procured five second-class tickets over the Canadian Northern

Railway from Port Arthur to Edmonton, giving a receipt therefor and requesting the agent to submit the account to the Department for payment. It had previously been arranged that the shipment should be taken to the end of the steel on the Athabaska Landing extension north of Edmonton, but the agent preferred to issue tickets only as far as Edmonton. These tickets were subsequently altered, I understand, to cover transportation as far as Morinville—some twenty-two miles beyond Edmonton, the farthest point to which the line is open for traffic,—and the account since submitted covers transportation to that point. We had expected to be required to transfer at Port Arthur from the Canadian Pacific Railway tourist car in which we had so far travelled to a Canadian Northern Railway car, but nothing was said about it and we proceeded in the same car as far as Winnipeg.

You had arranged by correspondence with Dr. Rutherford for a veterinary surgeon to examine the deer at Port Arthur and a careful examination was made by Dr. D. B. Fraser. At the time of Dr. Fraser's inspection I was engaged with the station agent in arranging for our further transportation and so failed to see him, greatly to my regret. Subsequently, however, I saw his assistant, Dr. Parkhurst, and went very fully into the circumstances surrounding the illness and death of the six deer that had died up to that time. We were supplied with medicine for the sick stag and given instructions as to treatment, but I think Dr. Fraser realized that the animal was not likely to recover.

We left Port Arthur at 3.45 p.m. on the 22nd September, by a special freight train and reached Winnipeg at 2 o'clock a.m. on Sunday, the 24th. The journey was uneventful except that the sick doe died on the night of the 22nd and the condition of the stag did not improve under treatment. One unfortunate mishap was the loss of one of the deer dogs. All the dogs were tied in the stock car used for baggage and were given sufficient rope to permit them to move about and have access to the water-barrel. The slats of the car were so close together that there was no possibility of a dog's squeezing through between them, except in the space where the iron watering trough was attached. As we were not using these troughs we had carefully turned them so as to completely block up this aperture, but some curious person must have turned one of the troughs so as better to see the dogs and left it open with the result that this dog squeezed through and hung suspended until his rope broke and dropped him beside the track. As the train was rounding a curve one of the herders noticed the dog suspended from the side of the car and clambered over the cars to secure it before it choked. Unfortunately the rope broke before the herder could reach the car. We left word with the agent at the next station to send the dog on to Edmonton by express if he could secure it, but there is little prospect of recovering it. This occurred near Hume, a station about forty miles west of Port Arthur.

Upon our arrival at Winnipeg at two o'clock on Sunday morning we had to transfer all of our personal effects, provisions, &c., into a Canadian Northern car which had been prepared for us. We were delayed some little time here owing to the necessity for taking on fresh water, coal and gas in our own car and water in the stock cars, but finally left at 6.15 a.m.

The journey from Winnipeg to Edmonton was uneventful; we made good time and there were no further signs of sickness among the deer. On the afternoon of the 25th Mr. J. W. McLaggan met us at Paynton and returned with us to Edmonton. Mr. McLaggan had been instructed to arrange all details in connection with the transportation and care of the deer beyond Edmonton and had joined us at this point in order to further discuss matters with me before our arrival at Edmonton. I found that Mr. McLaggan had arranged with the Canadian Northern Railway Company to take our cars straight through from Edmonton to the end of the steel—some sixty miles—and that he had a corral built at that point and a camp established with some of his men in charge, so that the deer could be promptly unloaded and taken from there to Athabaska Landing where scows were waiting to take them to their final destination. The only difficulty about these arrangements was that no provision had been made for a sufficient delay at Edmonton to permit of the purchase of the supplies which would be required by the herders and which must be taken with them to Fort Smith. It had originally been my intention to purchase these supplies myself upon arrival at Edmonton, but my experience at Quebec had very forcibly illustrated the undesirability of one man's attempting to do too many things in a limited time. I had suggested to you at Smith's Falls that it would be a good idea to forward a list of the required supplies to Mr. McLaggan so that he could have all the purchases made and the goods ready to be shipped with us. You had sent such instructions to Mr. McLaggan on the 20th September, together with a list of the required supplies, but these instructions failed to reach him until after our arrival at Edmonton and arrangements had then been made for sending us on at once; in fact an engine and crew were waiting to take us on at once, so that it was practically out of the question to make any further delay at Edmonton. The only alternative was to make the purchases at Athabaska Landing and this course was finally decided upon.

The cost of the supplies at Athabaska Landing was considerably higher than at Edmonton and it subsequently proved impossible to procure some articles at any price, but against this must be considered the cost to the Department of freighting the supplies by wagon from the end of the steel to the landing, a distance of some fifty miles over a very rough road, and the difficulty of securing a sufficient number of wagons for this purpose in the short time at our disposal. Taking all the circumstances into consideration the increased first cost of the supplies is of comparatively little importance. I regret, however, that the herders themselves had to pay the higher prices for the articles of clothing, etc., which they had to purchase for their long stay in the North. This was particularly hard on the chief herder, Gear, who, being married, had to make more extensive purchases than the others.

I saw the Hon. Mr. Oliver at Edmonton and reported to him regarding the shipment up to that point; he had previously given personal instructions to Mr. McLaggan regarding the arrangements beyond Edmonton. Mr. Oliver saw the deer and the herders and gave instructions to rush the shipment through as fast as possible and to procure and take with us a supply of closely-woven fencing wire for making a corral at Fort Smith to protect the deer from dogs. He also authorized me to have the head of one of the does that had died mounted by a taxidermist at Edmonton and shipped to Ottawa. All these arrangements were carried out and we left Edmonton at noon on the 26th September. The journey by rail up to this point had covered 2,425 miles, and the elapsed time was seven and one-half days, a remarkably good run when it is remembered that the running time of passenger trains between the same points is about four days. Every possible consideration was shown us by the officials of both railways.

EDMONTON TO END OF STEEL.

Leaving Edmonton at noon on the 26th September, we had an uneventful run to Morinville, some twenty-two miles north. This is the farthest point to which the road is open for traffic. At Morinville we were joined by Mr. A. A. Wocks, who has charge of the construction of the line beyond that point, and he accompanied us to the end of the steel. About four miles north of Morinville our baggage car ran off the track and the front truck was torn off; this delayed us about two hours. The road-bed was in pretty bad shape and we ran quite slowly, not caring to risk any more derailments. About dark we stopped at one of Mr. Wocks' construction camps where we had supper and watered and fed the deer. The stag which had been sick for several days died here and the carcass was left with Mr. Wocks. This head was useless, as the horns had been removed before leaving St. Anthony. Resuming the journey about eight o'clock we ran very slowly all night, averaging about three miles an hour, and reached the end of the steel about daybreak. Six puppies were born during the day, so that now, in spite of the loss of one dog, we have eight, although the new arrivals will be more ornamental than useful for some time.

BY WAGON TO ATHABASKA LANDING.

We found awaiting us at this point Mr. J. A. Dunn and Messrs. Leslie, Graham, and Hayward, all of whom are fire-rangers in the employ of the Department and who had been sent to build a corral and make other arrangements for our further journey. Mr. Dunn has been in charge of the fire-ranging in Jasper Park, while the others are the captain, engineer and cook, respectively, of fire patrol steamer No. 1, which the Department operates on the Athabaska river.

The builders of the corral evidently overestimated the size of the reindeer, as they had built a pole structure capable of containing moose or elk, but quite unsafe for reindeer. Considerable work was required to get the corral into shape to safely hold the deer, but this was accomplished in about an hour and the deer were then unloaded direct from the cars to the corral, which was on a bank a few feet above the level of the track.

Mr. McLaggan left by team at 9.30 a.m. for Athabaska Landing to arrange for suitable pens to be built in the scows and to try to get the crews together so that there would be no delay when the deer arrived. He took Mrs. Gear with him, at my suggestion, as we had no suitable accommodation for her in the camp and she could make the journey more comfortably with him than with us.

Mr. Dunn left camp about ten o'clock to engage teams to be on hand at daybreak of the following day and to purchase a load of green oats to be fed to the deer in order to save the small supply of moss remaining on hand. We had not previously fed anything but moss, but had found that the deer would eat green poplar and willow twigs and leaves and had resolved to experiment with green oats. I may add that the experiment proved entirely successful, as the deer seemed to relish the oats and we could not see that any ill effects resulted from the change of diet. We procured a further supply at Athabaska Landing for use on the trip down river. We spent the day in arranging our baggage in suitable shape for loading in wagons and in making halters to lead the ox deer. Mr. Dunn returned towards evening, having been successful in engaging ten teams.

Shortly after daylight on the morning of 28th September the first team arrived and we at once commenced to build crates inside the wagon boxes, to prevent the deer from jumping out and to keep them from being knocked about too much on the rough journey. The crates were merely slatted extensions making the wagon boxes about five and one-half feet high, enclosed by slats on top and divided into two compartments, fore and aft. From two to three deer, according to size, were placed in each compartment, so that each wagon accommodated from four to six deer. There were forty-two deer at this time, but four were oxen, broken to drive, and these we intended to lead, so that accommodation had to be provided in the wagons for thirty-eight; this required eight wagons. It had been suggested that the ox deer be led in front and the others driven after them, but, as the road for the entire distance runs through a bush country and as the deer were excited and strange to the country, it was considered safer to haul them than to risk delay and probably loss by their straying off into the woods.

A good deal of trouble was experienced in getting the deer loaded. All possible arrangements had been made to facilitate matters and a chute had been built so that the wagons could be backed directly up to the corral, but in spite of this it was found necessary to rope each deer and lead, or partly carry it into the wagon. There was so much trouble about the loading, the deer became so much excited and the loading took up so much time that we decided not to unload again until we could do so directly into the scow at the Landing on the evening of the following day. We concluded that, while the close confinement in the wagons was apt to prove injurious, it would be less so than the excitement and handling incident to unloading and loading again from an open corral where the conditions for handling the deer were even less favourable than at the original point of loading.

About eleven o'clock a.m. we finally got started with eight loads of deer and two loads of baggage, leaving one load of lumber, moss, &c., to follow by a team to be engaged later. After travelling about seven miles we unhooked for dinner at Stony Creek, and here I was fortunate enough to be able to hire a team to bring on the supplies we had left behind. We left Stony Creek at about 2 p.m. and reached Lewis' stopping place about 7 o'clock, having made about twenty-two miles. Mr. McLaggan met us about five o'clock, having completed the arrangements respecting the scows and crews. The roads were very rough and the deer had been pretty badly shaken up, but most of them were found to be in good condition and quite ready to feed when the usual supply of moss was put into their cages. One doe was found to be in bad shape, probably due to having been knocked down in the pen and trampled upon by the others. In order to relieve the overcrowding in some of the cages and to prevent similar injury to other deer Mr. McLaggan hired an additional team and we transferred three of the does to it, giving the sick one the rear pen to itself. Two of these deer recovered within a day or two, but the one that had been trampled died on the 29th September.

The following morning (29th) we started at 6.30 o'clock. Mr. McLaggan and I went ahead with a light team and reached the Landing about noon—distance about twenty-five miles. We spent the afternoon in completing the arrangements for our further journey and in purchasing supplies. Mr. McLaggan looked after the scows and crews and I made most of the purchases. The order for provisions was divided between the Hudson's Bay Company and Revillon Bros., while most of the hardware was purchased from Mr. F. R. Falconer. We were able to procure almost everything required, but unfortunately could not obtain any butter and only a small supply of potatoes and onions. Provisions for one year were purchased and a pretty complete outfit of hardware and camp equipment, so that upon arrival at Fort Smith the party should be able to maintain itself comfortably until the supplies can be replenished next year.

The deer arrived about five o'clock in the afternoon, apparently none the worse of their rough trip in close confinement, and were immediately loaded on to the scows. The scows are about fifty feet long by ten feet wide and a space of about twelve feet in the middle of each had been converted into a deer pen by means of 2 in. x 4 in. uprights and 1 in. x 3 in. boards, making a pen about six feet high. Sliding bars had been left on the side of each pen and the wagons were backed into the water to the side of the scows and the deer unloaded without any trouble; in fact the handling at this point was much easier than at any point throughout the trip.

BY RIVER FROM ATHABASKA LANDING.

On the following day (30th) the supplies purchased on the preceding day were delivered and loaded and by mid-afternoon all was in readiness to start, except that the load of moss, &c., which had been left behind at the railway had not arrived. There had been a heavy rain during the night and the roads, which at the best are bad enough, must have made the hauling slow and heavy. However, the delayed load arrived about six o'clock and was promptly transferred to the scows. Some further delay ensued, owing to the difficulty experienced by the captain and pilot in rounding up the boatmen. The four scows finally got away about seven o'clock and shortly after eight Mr. McLaggan and I followed in the steamer. We overtook the scows within about half an hour and took them in tow, continuing until about nine o'clock when we tied up for the night at a point about seven miles from the Landing.

We were very fortunate in getting away from Athabaska Landing with so little delay, as even firms such as the Hudson's Bay Company usually find it difficult to control their crews and two or three days often elapse before they can be got together and started on such trips. Moreover, had we not got away on Saturday night we would have been compelled to wait until Monday, as we would not have been permitted to start on Sunday.

The arrangements respecting the shipment had so far been carried out without mishap, but at this point the first serious difficulty occurred. The contract for taking the scows down the river from Athabaska Landing to Fort Smith had been made with Captain Shot, an experienced and reliable river pilot. The agreement provided that Captain Shot was to be paid a fixed sum per scow and in return for that he was to furnish a pilot and crews and arrange for their subsistence and to personally take charge of and accompany the party. At the last moment Captain Shot informed us that, owing to the sudden and severe illness of his wife, he would not be able to go. There is no reason to doubt Captain Shot's good faith, as he has the reputation of being one of the most reliable rivermen in the north. Captain Shot placed the scows and crews in charge of Philip Atkinson who had already been engaged by him as pilot, and he also sent one of his own sons to assist and to pilot the steamer back up river. The arrangement worked very well as far as I accompanied the party and Philip Atkinson has the reputation of being quite as competent a river pilot as Captain Shot, but some difficulties arose later over the terms of engagement of the crew.

On the following morning (1st October) we re-arranged some of the loads and trimmed the scows so as to make towing easier. Just as we were about ready to start we met Mr. F. J. P. Crean, an engineer in the employ of the Department, who was returning to civilization after some eighteen months of northern travel. Mr. Crean and his party, which included Mrs. Crean, were travelling by one of Mr. Jas. Cornwall's steamers, which stopped for a few minutes to permit us to exchange greetings and the latest news. We again started down stream about 8.30 o'clock and made good progress until about eleven, when we stuck hard and fast on a mud bar. After trying unsuccessfully for an hour or more to extricate ourselves from this unpleasant situation, without other result than to get more firmly imbedded in the mud, we finally cut the scows loose and, one by one, poled them off the bar and sent them adrift with a crew of two men each. About two o'clock we managed to work the steamer free and again started down river, picking up the scows as we passed them. We tied up for the night at Calling river, having made, in all, some forty-eight miles.

The next morning we got away about seven o'clock and ran steadily all day arriving about dark at Bentley's trading post, about a mile above Pelican rapids. There is a flowing well of natural gas near the river bank at this point which has been burning more or less steadily for some twelve or fourteen years. I understand that the gas was discovered and tapped by some men who were boring for petroleum several years ago, and that efforts have since been made to stop the flow, but without success. At present the gas is escaping from a pipe some two inches in diameter a couple of feet above the ground and the flame shoots into the air some thirty or more feet. It is quite spectactular, especially at night, and is evidently a favourite camping place for river men and others.

We were advised by Mr. Bentley that it would not be safe for us to take our steamer further down the river, as the water was low and still falling and we would find it difficult, if not impossible, to come back against the current. Whether or not Mr. Bentley overestimated the difficulties of the return journey I don't know, but after thoroughly discussing the whole situation Mr. McLaggan and I concluded that it would serve no useful purpose to take the steamer further. Up to that point we had been able to tow the four scows at the rate of about seven miles per hour, but from Pelican rapids onward the current becomes swifter, although there are intervals of slack water, and the scows should be able to make fair time by the use of sweeps.

In any case we could only go as far as Grand Rapids, some sixty miles farther down, and the time saved would not, in our opinion, have justified the risk of having to leave the steamer so far down river for the winter. We decided, therefore, to turn back with the steamer and to send the scows on in charge of Mr. J. A. Dunn, with Philip Atkinson as pilot.

The morning of the 3rd October was spent in again rearranging the loads of the scows so as to facilitate rowing and steering and about noon the four scows started on the last stage of their journey. A tent had been put up for Mr. and Mrs. Gear on the stern of the leading scow and a cooking stove set up in it. Mr. Dunn and the two herders, McNeill and Broomfield. also found sleeping accommodation on this scow and it was arranged that Mrs. Gear would cook for the party. Philip Atkinson took personal charge of this scow.

The difficulty over the engagement of the crews, to which reference has previously been made, first came up here. Atkinson reported that Capt. Shot had only engaged the men to go as far as Fort McMurray, some one hundred and forty miles below Pelican rapids. For the further journey of some two hundred and fifty miles from Fort McMurray to Fort Smith Capt. Shot had agreed to take down some packages of freight for Colin Fraser, a down-river trader, and in exchange for this service Mr. Fraser was to have towed the scows on from McMurray with his steamer. Through some oversight or misunderstanding the freight for Mr. Fraser was not taken on at Athabaska Landing and, consequently, there is no reason to suppose that Mr. Fraser would be willing to carry out his part of the bargain. Mr. McLaggan had previously procured for Mr. Dunn a letter of credit on the Hudson's Bay Company for five hundred dollars, to provide for any emergencies that might arise and he now authorized Mr. Dunn to engage new crews at Fort McMurray, should it become necessary, or to arrange with Colin Fraser, or any other steamboat owner, to tow the scows on from that point. Any payments made by Mr. Dunn for such service were to be reported at once to Mr. McLaggan in order that the amount might be deducted from the contract price to be paid to Captain Shot. This was the only arrangement that could be made under the circumstances and I can only express the hope that it worked out satisfactorily. It was our intention to take this matter up with Captain Shot on our return to Athabaska Landing, but he was not in the village when we got back.

At 12.30 p.m., Mr. McLaggan and I started on the return journey on the fire-patrol steamer and reached Athabaska Landing at 9 p.m. on the 5th October. The actual running time on the return journey was thirty hours and the distance one hundred and twenty miles, which is not bad time for a small steamer against a strong current. On the trip up river we met Mr. Goodspeed and Mr. Tibbetts, engineers of the Public Works Department, going down in a canoe with two Indian paddlers to inspect the channel improvement work at Grand Rapids.

I was, fortunately, able to secure passage in the semi-weekly stage which left Athabaska Landing on the following day (6th October) and reached Edmonton on the evening of the 7th. Mr. McLaggan was delayed in the Landing paying some accounts and did not leave until later in the day, arriving at Edmonton on the 8th. I left Edmonton on the night of the 9th and, after spending one day in Calgary, reached Ottawa on the morning of the 14th October.

GENERAL.

I believe I am right in assuming that this shipment of fifty deer was intended merely as an experiment with a view to determining two things: first, if the deer would stand such a long, hard trip at this season and, second, if suitable feeding ground could be found for them in the vicinity of Fort Smith and if the deer could be protected from dogs and Indians. While we have not yet received reports of the final stage of the journey we have sufficient information to justify the statement that these reindeer have proved themselves excellent travellers and, barring such an accident as shipwreck in the rapids, there is every reason to suppose that at least forty of them will safely reach their destination. Had it not been for disease due to the gypsum the loss would have been trifling, probably not more than two or three, and this in spite of the fact that the shipment was made at a peculiarly unsuitable season. The rutting season generally begins between the tenth and twentieth of September and during its continuance the deer are more difficult to handle than at any other time. I do not know a great deal about the habits of reindeer but assume that the season, in this instance, will merely be postponed until the deer reach their destination, about the middle of October, and that it will not be lost for the year. It will be unfortunate if no fawns are born in the spring of 1912.

Autumn is the only season when reindeer can safely be shipped over this route. In winter the drawback is that the northern rivers are frozen and the deer could not well be taken beyond Athabaska Landing; in early spring the does are heavy with fawn and later are suckling their fawns, while in summer the great heat would probably prove disastrous.

With regard to feeding grounds I made careful inquiries from men familiar with the north country and am informed that there is an abundance of deer moss within reasonable distance of Fort Smith, or Smith Landing, particularly the latter, and that it is plentiful over practically all of the north. We found quite a good deal of moss near our camp at the end of the railroad and picked several sacksful there for the deer; we also noticed it at many points along the road to Athabaska Landing and along the river, so that there seems to be absolutely no doubt of a plentiful food supply.

The question of protection from dogs and Indians will depend very largely upon the good judgment and watchfulness of the herders and cannot be determined until further reports are received next year. In my opinion the deer camp should be established at least fifteen to twenty miles from any settlement and if this is done and reasonable care shown there is no reason why the experiment should not succeed.

In the event of the experiment proving reasonably successful I would strongly rcommend purchasing about two hundred more deer, chiefly young does, and shipping them in early next fall. The number already purchased is not enough to justify the expense of keeping them and it will be many years before, from such a small beginning, a herd of reasonable size can be raised, but with a start of some two hundred does and about forty stags a rapid increase could be confidently expected, while the cost of management would remain about the same, as three herders could look after three or four hundred deer as easily as after forty. There is also the question of apprentices to be considered. It is understood that the herders now with the deer will train others to succeed themselves and that these apprentices, to be selected from Indians in the vicinity, will be housed, fed and clothed at the expense of the government during their time of apprenticeship. It would hardly pay to do this unless the herd were much larger and it is doubtful if a very small herd would sufficiently interest the natives to make them willing to take up the work. There is no doubt that by next September the Canadian Northern railway will be in operation to Athabaska Landing and that the whole trip from Newfoundland to Fort Smith can be covered within a month and probably with a very small percentage of loss.

As an alternative I would suggest attempting to capture and domesticate young barren-ground caribou which migrate southward to the vicinity of Fort Smith every winter. There is little difference between the species, except in the size and formation of the horns; if there is any difference in size the caribou are slightly larger.

PUBLIC INTEREST IN REINDEER.

All along the route from Quebec to Athabaska Landing great numbers of people came to the stations and looked at the deer and a good deal of interest seemed to be taken in the experiment, judging from the questions asked. The ear markings were the subject of a great deal of comment. All the deer were marked by a cropped ear, so as to permit of ready identification at a distance, but in addition to this each deer had an aluminum button, or disc, in the unmarked ear. These discs are marked with the year of birth and may also bear such addditional markings as will distinguish different families, or species, if required. Mr. Holt, of Quebec, was greatly interested in these discs and was of the opinion that he might advantageously use them to distinguish different families of foxes which he is successfully breeding in captivity on his estate at Montmorency Falls. I may add that Mr. Holt very kindly offered the use of a pasture at Montmorency Falls, so as to give the deer a chance to recuperate after their confinement on board ship, but, while I greatly appreciated his kind offer, I was unable to accept it owing to the necessity of getting through to our destination before the Athabaska river froze up.

HERDERS.

The herders were selected by Dr. Grenfell and their contracts for service were prepared and executed under his direction. Mr. Nathaniel Gear, the chief herder, is thirty-three years of age and was born at Groswater Bay, on the Labrador coast. He has lived at Cape Eliek, about 200 miles north of his birth place, for the past fifteen years up to October, 1908, since which date he has been with Dr. Grenfell's deer herd at St. Anthony, Newfoundland. He learned the management of reindeer from the Laplanders who accompanied the original shipment of deer to St. Anthony and remained with them for two years after their arrival. For two years prior to his engagement by the government Gear was in charge of the herd. According to Gear's statement the herd purchased for Dr. Grenfell comprised 250 does and 50 stags and oxen and reached St. Anthony in December, 1907. Mr. Gear is married, but has no children. His wife accompanied him to Fort Smith, where she will cook for all the herders in return for free rations to be furnished by the government. Mrs. Gear is also a native of the Labrador coast.

William McNeill, the second herder, is twenty years of age and was born at Island Bay, on the northern part of the Labrador coast. He served a two years' apprenticeship with Dr. Grenfell's herd.

John Broomfield, the apprentice herder, was born at Groswater Bay and is twenty years of age. He served an apprenticeship of one year with Dr. Grenfell's herd.

All the herders are robust and apparently in perfect health and are thoroughly familiar with the handling of deer. They should be able to readily adapt themselves to the new conditions of life in northern Canada, as they have from childhood been accustomed to the hardships and vicissitudes of the life of hunter and fisherman on the inhospitable Labrador coast.

PHOTOGRAPHS.

I regret that I was unable to take good photographs of many of the most interesting incidents of the trip. It usually happened that there were so many other and more important things to be done at such times that I was compelled to forego the pleasure of using the camera. The pictures which accompany this report will, however, give a fairly good idea of the deer and of the conditions under which their long trip was made.

Appended hereto are a statement of the expense so far incurred in connection with this shipment, and a schedule of the supplies purchased and sent to Fort Smith.

Respectfully submitted,

E. F. DRAKE.

APPENDIX TO REPORT ON REINDEER SHIPMENT.

DEPARTMENT OF THE INTERIOR, FORESTRY BRANCH.
OTTAWA, March 31, 1912.

R. H. CAMPBELL, Esq.,
Director of Forestry,
Ottawa.

SIR,—I beg to submit the following additional report respecting the reindeer experiment. This information has been obtained from letters and reports submitted by Mr. J. A. Dunn and Nathaniel Gear. and takes up the account of the journey from the point where my report of October 25, 1911, left off.

The party reached Grand Rapids, on the Athabaska river, about four o'clock in the afternoon of October 4, having run the sixty miles from Pelican rapids in about twenty-eight hours, including the time lost by tying up at night. The stage of water was very low and it was found necessary to transfer most of the freight and to reload below the rapids. The deer were not unloaded and all the scows went through safely.

Good progress was made until the morning of October 16, some 260 miles having been covered in this time. On this morning, however, a heavy head wind was encountered and the scows were blown into an eddy and it was found impossible to proceed. Strong winds, with snow and rain, continued until the 20th, the supply of moss ran short, the scows leaked badly from scraping over the rocks in the rapids, and six deer died.

On the 20th, the weather conditions improved and the party again got under way, making twenty miles during the day. They were also fortunate in being able to pick sixty sacks of moss for the deer. The following day they made a run of fifty miles, but on the 22nd and 23rd, head winds were again encountered and but ten miles were covered.

Lake Chipewyan was reached on the evening of the 25th, and, after waiting until nine o'clock at night for the wind to die out, an attempt was made to row two scows across to the Hudson's Bay Company's post on the north shore. The pilots proved incompetent and the scows were tied up to a root until morning. In the morning it was necessary to break ice for about half a mile before getting into open water, after which sail was hoisted and the remaining distance was covered in good time. The crews then returned to the mouth of the river for the remaining scows, which were safely brought across arriving at about two o'clock on the morning of October 27.

Here the party were met by a steamer which had been sent up from Fort Smith to tow the scows down the Slave river to that point, a distance of some eighty miles. They left Fort Chipewyan at 4 p.m., on the 28th, and made about nine miles, when they ran on a sand-bar where they remained all night. The following forenoon was spent in getting the steamer off the bar and in the afternoon ice was encountered. so that only about seven miles were covered during the day.

On October 30 the river was frozen nearly across and there was so much ice in the rapids that the captain of the steamer refused to go any farther. The deer and freight were unloaded, the scows were drawn up on the bank and a permanent camp was established for the winter at a point some seventy miles south of Fort Smith and about twelve miles from Fort Chipewyan. There is an abundance of moss for feed and the camp is sufficiently removed from any settlement to insure safety from dogs.

Mr. Dunn remained with the herders until a comfortable cabin had been built and the men and stores safely housed, after which he returned to Edmonton, the greater part of the journey being accomplished on snowshoes with a dog team.

The deaths occuring during this stage of the journey were as follows:

October 18th	2	does
" 19th	3	"
" 20th	1	doe
" 30th	1	"
" 31st	1	"
November	1	ox deer
Total	9	

There are now thirty-two deer remaining out of the original fifty, viz.: 24 does, 5 stags and 3 oxen, and the latest reports show that they have wintered well and are in much better condition than when they left St. Anthony.

The difficulties encountered between Grand Rapids and Fort Chipewyan were due, chiefly, to the fact that the scows were under-manned. When travelling in slack water or against head winds, there were not enough men to handle the scows, in spite of the fact that Mr. Dunn and the three herders worked at the sweeps. This delayed the party and there was further delay due to lack of energy on the part of the crews, but this last is always to be reckoned with when dealing with halfbreed boatmen. The stock of moss and green oats taken from Athabaska Landing would have been sufficient to last for the whole journey if it had been accomplished in reasonable time. The death of the eight deer in the latter part of October was directly due to this delay and the consequent shortage of feed.

Reports received from the Departmental Agent at Fort Smith indicate that suitable grazing ground and abundance of reindeer moss may be found within about fifteen miles of that point and the deer will be transferred there as soon as spring opens—probably about the end of May. From present indications there will be no fawns born this spring, owing, no doubt, to the close confinement and long journey during the rutting season last fall. This is greatly to be regretted, but could not be avoided.

Respectfully submitted,

E. F. DRAKE.

No. 38.

REPORT ON IRRIGATION.

DEPARTMENT OF THE INTERIOR,
IRRIGATION OFFICE,
CALGARY, April 20, 1912.

R. H. CAMPBELL, Esq.,
Director of Forestry and Irrigation,
Ottawa.

SIR,—I have the honour to submit herewith my annual report of the work done under my charge during the year 1911 on Irrigation and Canadian Irrigation Surveys.

I have the honour to be, sir,
Your obedient servant,

F. H. PETERS,
Commissioner of Irrigation and Chief Engineer.

REPORT ON IRRIGATION AND IRRIGATION SURVEYS,

BY

F. H. Peters, A.M. Can. and Am. Soc. C.E., D.L.S., A.L.S., Commissioner of Irrigation.

It may be said with certainty that the general public does not realize the great importance or the large scope of the work which is being carried on by the irrigation office at Calgary. In an endeavour to correct this, attention is drawn to the fact that during the season 1912-13 twenty-two civil engineers will be employed on the staff, and, to mark the significance of these figures, it should be noted that this is the largest engineering staff connected with any one office of the Dominion Government except the office of the Public Works Department at Ottawa. Another significant fact is that the irrigation office carries on its property returns 45 horses and the necessary equipment of wagons, &c., all of which are used during the summer in carrying on the field-work.

The irrigation office may well be said to be the guardian of the water resources of the provinces of Alberta and Saskatchewan, and this naturally carries with it great responsibilities. Much of the work done by this office must necessarily be for the benefit of future generations, and this, unfortunately, does not tend to make the work popular with the people of to-day. This is especially true of the work of stream measurement that is being carried on, and, because there is plenty of water for everybody to-day, even the most interested parties, who are themselves licensed by the government to use water, do not appreciate the work and do not realize that a perfect system of stream measurement means a perfect safeguard to their water-rights in the future, and that every dollar spent to-day in prosecuting this work means many dollars saved in the future in the prevention of litigation that must arise if the load that is placed on every stream is not carefully guarded to-day. Our neighbours to the south have learned this lesson by costly and bitter experience, and we may, if we will, profit by their experience and avoid the mistakes which they made during the earlier days of irrigation development.

The work has been carried on as efficiently as possible, and with due regard to economy, but a considerable increase in the appropriation is necessary if the work of administration of water resources is to be carried on in a manner commensurate with its importance.

GENERAL INFORMATION REGARDING IRRIGATION IN ALBERTA AND SASKATCHEWAN.

The irrigation office has jurisdiction over all water-grants made in the provinces of Alberta and Saskatchewan (except grants for water-power purposes, which are handled by a separate branch) and it can be easily understood that the patrolling of this vast area requires a large staff and a sound organization.

The remarks here following relate almost entirely to the work of irrigation inspections. The work done by this office naturally divides itself into two separate branches: irrigation inspections, together with reservoir site surveys, &c., and the stream measurement work. The two are closely associated and must go hand in hand, but are submitted separately in order to keep down the bulk of each volume, and also because the report of progress of stream measurements is nearly all composed of tables of gauge-heights and discharges and is more fittingly published in a separate report for convenience of reference; a brief, general report on stream measurements is, however, appended hereto.

The two provinces cover an area of 504,190 square miles and extend for 540 miles east and west and 420 miles north and south.

The province of Alberta includes an area of 253,540 square miles, made up of 251,180 square miles of land and 2,360 square miles of water. The province of Saskatchewan includes an area of 250,650 square miles made up of 242,332 square miles of land and 8,318 square miles of water.

In order to give an idea of the extent to which irrigation is now being carried on in the western provinces the following brief summary is given.

The total amount of water granted by the Dominion Government in the two provinces is 23,865 cubic feet per second. Of this total amount 23,536 c.f.s. have been granted for purposes of irrigation, leaving 329 cubic feet per second divided up between the other three classifications; that is, domestic, industrial and other purposes.

In Alberta the total amount of water granted for irrigation purposes is 23,114 c.f.s., or enough to irrigate 3,467,100 acres of land, according to the authorized duty of water which is 2·023 acre-feet per acre.

Of this quantity four large companies have 22,500 c.f.s., leaving 614 c.f.s. divided up among 320 individual users; excluding from these 24 applicants who each have an average grant of about eight c.f.s., we get figures for the average individual water user, viz.: 414 c.f.s. divided up between 296 individual users, which gives each one 1·40 cubic feet per second, or enough to irrigate 210 acres of land.

Of the four large companies mentioned above, the following facts may be stated. The Canadian Pacific Railway Irrigation Company has been granted from Bow river, near Calgary, 3,000 c.f.s. at low-water stages, 13,000 c.f.s. at high-water stages, and 15,000 c.f.s. at flood stages. It has approximately one million acres of irrigable land, and already has issued over 1,500 agreements to furnish water to settlers within this tract.

The Alberta Railway and Irrigation Company has been granted from Belly river 500 c.f.s. at all stages of flow, from Milk river 500 c.f.s. at low-water and 1,500 c.f.s. at high-water and flood stages, and from St. Mary river 500 c.f.s. at low-water and 2,000 c.f.s. at high-water and flood stages. It should be noted, however, that the total amount of the grants from Milk river and St. Mary river have been somewhat modified under the terms of the International Waterways Treaty recently made between

Canada and the United States. This company has already issued water agreements to over 800 water-users.

The Southern Alberta Land Company has been granted from Bow river 2,000 c.f.s. at high-water and flood stages, and from the South Saskatchewan river 1,000 cubic feet per second at all stages. This company has developed a very large reservoir for the storage of flood waters, in order to utilize its high-water and flood license from Bow river. The works are not yet completed and therefore the company has not as yet entered into any agreement to supply water to actual users. The company controls about 400,000 acres, about half of which is irrigable.

The Alberta Land Company, operating as a subsidiary company to the last named company, and diverting water through its works, has a grant of 500 c.f.s. from the Bow river at high-water and flood stages. The works of this company are not yet completed.

In the province of Saskatchewan irrigation has not been undertaken to nearly the same extent as in the province of Alberta, and it has no large irrigation companies. There has been granted to date in Saskatchewan, for irrigation purposes, 423 cubic feet of water per second, and this quantity is divided among 241 individual users. This gives each one an average of 1·75 cubic feet per second, or enough to irrigate 262 acres.

In an endeavour to give some idea of the irrigation work that is now being carried on, the map published with this report has been prepared to show the position of the intake of each of the smaller schemes and also the territory covered by the large schemes. This map covers practically all the territory where irrigation is carried on, and by referring to it and to the above mentioned figures, it will be possible, with a few minutes' study, to get a fair idea of the size of the territory to be covered and of the area of land which is being irrigated.

PROCEDURE FOR GRANTING WATER LICENSES.

The work required in connection with irrigation inspections will not be well understood by those unfamiliar with the work, and, to outline in a few words what this work comprises, the following brief summary is given.

Licenses are granted by the Dominion Government, under the administration of the Minister of the Interior, for the use of water, under the following classification:—

1. Domestic uses.
2. Industrial uses.
3. Irrigation purposes.
4. Other purposes.

Industrial grants are given for the purposes implied by the name, but do not include the sale or barter of water. Where the sale or barter of water is concerned, the grants are classified as for 'other' purposes.

The procedure followed in granting water-rights is, briefly, as follows:

Any applicant for a water-right must first submit a memorial setting forth the purposes for which the water is required, and, accompanying this, must be general and detail plans showing where, and how, and for what purpose, he intends to use the water and what works he intends to construct or install. The next step is an inspection of the scheme by one of the government engineers, who reports upon the feasibility of the scheme, the question of water-supply and the character of the works to be constructed. The proposed scheme is then advertised in a local paper for six weeks, in order to give the local public notice of what is proposed and what water-supply and lands will be affected. Any protests which may be made against the proposed scheme are carefully investigated. Authorization is then issued for the construction of the necessary works, and a limit of time is placed within which the construction must be completed. The Department's engineers inspect all schemes periodically during construction, and, finally, after the works have been satisfactorily completed and inspected, the water license is granted.

DIFFICULTIES IN CARRYING ON THE WORK.

In case any person should be interested enough to consider the size of the staff employed to do the work required, and to make a study of the cost of the work, it is only fair to the organization to detail here some of the difficulties met with in carrying on the work. These may be generally stated as the great area to be covered, the difficulties of transportation, and the great variety of the inspections to be made. For instance, in the Maple Creek district, where a great many new schemes are being constructed at present, an inspection party starts out from Maple Creek and, perhaps after a twenty-mile move, has to make a complete survey of a new scheme, including in many cases a right-of-way survey over lands not owned by the applicant for water-right. As soon as this is finished the party will probably have to make a day's, or half a day's, move to a scheme which requires only an eye inspection by the officer in charge, and so the work goes on. A minute's consideration of this briefly sketched programme will bring forth clearly the two great factors of apparent waste; that is to say, a great deal of time is taken up in travelling about from place to place and, on account of the great variety of the inspections required, it is not possible to always keep all the men usefully employed. The party must be large enough to efficiently survey and inspect the larger schemes and is, therefore, at times unnecessarily large for some of the work required. This difficulty cannot be avoided, as, unless each party takes all the schemes that are in the same neighbourhood as they come, the waste of time in travelling would be out of all proportion to the work accomplished.

Again, take the case of the engineer for special inspections. This officer inspects the many schemes that are scattered all over the two provinces and these are so widely separated that he has to travel by train from place to place. He may have to travel half a day by train and then waste half a day in the hotel waiting to get an early morning start in order to make a long day's drive to some scheme thirty or forty miles from the railroad. Upon arriving at his destination he probably finds that he requires the assistance of a man or two to make a chained traverse of a scheme, and he may have to spend half a day getting these men from a neighbouring ranch or farm and then when he does get the men they, being unaccustomed to the work, naturally make very clumsy and slow assistants. To complete the inspection there still remains the long drive back to the railway and possibly another half day wasted in the hotel waiting to catch a train on to the next point. All of these factors combine to increase the cost of inspection work, but this is unavoidable under present conditions. The engineer assigned to this class of work must be a man of wide experience, as within a brief period he may have to inspect an irrigation scheme, a railway water-tank scheme, or a town water-supply scheme; his services are very often required as an arbitrator between the interests of some town wanting a water-supply and a number of persons who fear that their domestic rights from a certain stream are being encroached upon.

The difficulties met with by the office end of the organization at Calgary are those of directing the work which is being carried on at such distances and, in many cases, in localities where the mail facilities are very poor; and again those of studying the never-ending questions of the adequacy of the water supply from a given source, which, in many cases, owing to the lack of records of stream-flow, present problems that are well nigh impossible of definite solution.

Another great difficulty that is met with by the office staff is that the Commissioner, or his assistant, must examine and approve the design of the works and lay-out of every scheme that is submitted. In almost every case the question arises where to draw the line between insisting on permanent, and therefore expensive, works and those of a temporary nature which are within the limit of the applicant's means at present. In the first case the necessary expense of the works may be unduly burdensome upon the applicant, while in the second case it is usually found that if temporary works are once allowed it is almost impossible to get the irrigator to improve the works at a later date when he is able to afford the expense. Another separate study for each case is the class of material, particularly for dams, that is within the means of the applicant in any particular locality.

DIVISION OF WORK INTO DISTRICTS.

The work of inspection is divided into two districts within which the bulk of the work lies, viz.: the Maple Creek district and the Calgary district; the other schemes, which are widely scattered, are inspected by so-called special inspectors.

The Maple Creek district is under the especial charge of a division engineer, who has under his control two assistant engineers, each with a field-party working under his direction. The Calgary district is patrolled by one district engineer with a small party. Separate reports are appended from these two officers, as well as from the special inspections engineers, and, as these officers take up in detail the various points in connection with their districts and work, and also describe the limits of the several districts, no further mention of them need here be made.

DETERMINATION OF THE LOW, HIGH AND FLOOD DISCHARGE OF STREAMS.

In order that the following may be intelligible it is necessary to explain the procedure in granting water-rights against any stream or other source of supply. The procedure is to consider that every stream has three separate stages of flow; that is to say, low-water stage, high-water stage and flood stage, and each water-license is issued against a specified stage of the stream flow.

This procedure will be made clear by the following illustration. Suppose a creek has a low-water, high-water and flood discharge between the limits, respectively, of 0 to 10, 10 to 30, and 30 to 50 cubic feet per second. The first licenses against the stream will be issued for 'all stages' of flow until the total of 10 c.f.s. is reached. The next licenses will be issued for 'high-water and flood' stages until these, together with the 'all stages' licenses, reach the total of 30 c.f.s. After this any licenses that may be issued will be for 'flood' stages, until the total of all the licenses reaches the maximum of 50 c.f.s., after which all applications for water-licenses against the stream will be refused.

Now, in order that, under average conditions, there may always be enough water in the stream to fulfil the obligations of all the licenses issued, it is clear that the records of this office must show definitely the quantity of water in the stream, under such average conditions, at the three stages above mentioned. It is also clear that it is a most difficult matter to determine accurately the flow of the stream at the three respective stages; in fact, these figures can only be determined with even a fair degree of accuracy after a long series of stream measurements has been carried on on each stream. It is at this point that the work of stream measurements is indivisible from the work of irrigation inspections.

At the present time the quantities for all the streams, shown against the stages of low, high and flood discharge, are most inaccurate, as they indeed must be, because at the time when they were computed several years ago practically no continued series of stream measurements had been made.

During the present winter the matter of determining these quantities with some degree of accuracy is being actively taken up. The Department now has fairly complete records of stream-flow on several streams from the year 1908 to the year 1911, inclusive, and on most of the important streams used for irrigation purposes the records of stream measurement date back to 1909. The procedure being adopted is as follows: A separate sheet is being prepared for each stream and on this is being plotted as a profile the mean monthly discharges for all the years during which records have been obtained. The profile for each year is plotted with a different coloured ink, so that the different years can be readily distinguished. After a careful study of each sheet two horinzontal lines are drawn across the profiles showing the three stages of flow as arbitrarily determined from the study. The horizontal lines are drawn only in pencil, so that at some future time, when more records of stream-flow are available, they may be shifted if necessary to more accurate positions as shown by the increased length of the period over which the stream measurements have been gained.

This arbitrary determination of the stage of the streams is a most important matter, as, if these determinations are in error, the streams will either be over-recorded or under-recorded. In the first case, the existing rights of the first license will be jeopardized, and, in the second case, applications will be refused when sufficient water is really available and might be put to beneficial use for irrigation or other purposes.

OFFICE WORK.

A great deal of office-work is required to keep the hydrographic records up to date and in proper shape. To understand this, it should be realized that about 130 cards of gauge-height observations are received at this office each week from the various gauge-height observers. These cards all have to be checked over and the information taken from them and noted on the proper office-forms for purposes of record. A good deal of correspondence springs from this source in writing to the observers to get records submitted which have been overlooked, or in order to get satisfactory explanation of gauge heights that cannot, perhaps, be deciphered in the office. Again, all the hydrographers are required to send in their note books of stream measurements as they are filled up, and these, also, have to be checked and then filed away so that the information may be readily available for the hydrographers when they return to the office in winter for the purpose of working out the records from their summer's field-notes.

The office staff, generally, has throughout the past season been overworked, owing to the fact that the staff employed was not large enough to handle the work properly. This is a most undesirable state of affairs as it does not lead to, or allow of, the best work being done. When everything has to be rushed through in a hurry, as has been the case, mistakes and slips are bound to occur, no matter how great effort is made to avoid them.

The following list gives a summary of the correspondence, plans, documents, &c., that were handled in the office during the fiscal year ending March 31, 1912.

Letters received	6,939
Letters sent	10,660
Applications for water-rights recorded	67
Plans with applications for water-rights (in duplicate)	67
Right-of-way easements recorded (in triplicate)	32
Transfers of applications recorded (in triplicate)	25
Right-of-way plans recorded (in quadruplicate)	32
Water agreements filed (in quadruplicate)	181
Notices of cancellation of water agreements (in triplicate)	77
Notices of transfer of water agreements (in triplicate)	20
Applications to cross road-allowances recorded	41
Applications for free right-of-way over Crown Lands recorded.	36
Notices for publication prepared	67

Plans prepared	466
Blue-prints made	1,161
Certificates issued under Section 20 of the Irrigation Act	62
Certificates issued under Section 33 of the Irrigation Act	39
Number of licenses recorded (in triplicate)	51
Reports received and dealt with	492
Weekly reports received from Engineers	670
Reports of discharge measurements (Form H. 4) received	1,490
Weekly reports of gauge heights (Form H. 2) received	4,200
Descriptions of regular gauging stations (Form H. 1) received	130
Reports of changes at River Stations	57

DIFFICULTIES AND DEFECTS IN THE SYSTEM OF IRRIGATION FARMING.

It may not be out of place here to draw attention to some of the troubles and faults that are experienced in connection with the average irrigation schemes of to-day.

Without wishing to cast any reflection on the science of dry farming, it may truthfully be said that irrigation farming is certainly a scientific work, and a general fault that is found is that the average irrigation farmer does not understand the proper methods of applying the water to his land. With the fixed idea in his mind that the thing to do is to put water over his land he proceeds forthwith to do this, without any thought of consulting the requirements of any special crop, and very often without any study of the natural features of the ground that lend themselves to the spreading of the water over the land. He thus very often works against nature instead of with her, gives himself much extra, and very often wasted, work, and then, when the harvest season comes, says to himself, 'I have irrigated my land; why have I not raised a bumper crop?'

This procedure being carried on for several years naturally tends to depreciate in the farmer's mind the benefits that are reaped from the proper irrigation of field crops, and hence it is found that in many districts, and, almost, it may be said generally, the great benefit that might be reaped from a properly conducted irrigation of field crops is not realized or understood.

Another serious drawback to irrigation in many sections of the west, and one which is not the farmer's fault, is the very changeable seasons that are experienced in the matter of rainfall. In many of the southern parts of the United States where irrigation flourishes, the climatic conditions are practically a constant. The farmer can rely upon almost a fixed number of hours of dry weather with an abundance of sunshine, and he can thus determine in advance when he will have to apply water and how much he will have to apply. This is not the case in Alberta and Saskatchewan. As a citation of a good example of this, the season of 1910 was so dry that many fields of grain were withered before they could mature; on the other hand the season of 1911 was so wet that the period of growth was prolonged and much of the grain was frostbitten before it could mature, and the country in general suffered from a late harvest. The irrigation farmer has, therefore, to watch the weather with the greatest care and, although he may not need them, has always to keep his ditches ready for instant use. Unfortunately, however, it has been found that during the wet seasons the irrigator allows his ditches to fall into a state of more or less disrepair and leaves them this way during the next season, and perhaps the next, until some day his crops are in urgent need of water, when his ditches are found to be in such a bad state of repair he cannot run the water through them on his land and therefore suffers a crop failure as the result.

Another point which is deserving of comment is what may be termed the 'grain irrigation illusion.' The irrigation by a farmer of a comparatively small field of grain certainly has its place in a proper system of rotation, but the farmer should be warned that the irrigation of a large grain crop is certainly not the easiest, the most practical or the most remunerative way in which he can apply the water to which he is entitled. Owing to the fact that there is usually a period of only about fourteen days (possibly twenty-one days) in which water can be applied to a grain crop, it is necessary to apply the water very rapidly, which is difficult. Practically it would seem, also, that only some system of flood irrigation is possible for this crop and this requires a very even piece of ground in order that the water may be spread easily and evenly. One great inherent drawback to the matter generally is that the farmer, in leaning toward the irrigation of large areas of grain, is leaning toward a magnified form of soil robbing, which must be the result of the continuous raising of irrigated grain crops on any piece of land.

The tendency of farmers to specialize in grain irrigation is a most serious menace to any large irrigation company, because the fact of all the water-users growing a crop which requires a large amount of water within a very short period would make it absolutely impracticable and uneconomical for the company to construct its main ditches with a capacity sufficient to supply the great demand for water within so short a period. For this reason a practice of diversified farming is absolutely essential among farmers whose water-supply is furnished by any large irrigation company.

What is termed by the irrigation office the 'Calgary district' (that is, the district lying, generally speaking, between the Canadian Pacific railway, from Calgary to Macleod and the foothills of the Rocky mountains) comprises most of the oldest small irrigation schemes, and many of these have fallen into a very bad state as regards the condition of the works. This is probably due to the fact that this district has recently experienced a series of wet years and this has led the irrigators to feel that they no longer require their irrigation ditches.

Many of the older water-users well remember the dry years of the past, when their very existence depended upon their irrigation schemes, but a general feeling now seems to exist, for some reason which nobody can explain, that drouth need no longer be feared in this district. No man can predict the weather conditions of the future, but every evidence that can be produced would tend to show that the weather conditions rotate in a definite cycle of years and that dry years will probably come again. For this reason every holder of a water-right to-day should look forward for his own protection to the time when his irrigation ditch may again become a necessity, and should keep his ditch in sufficiently good repair to allow him to retain his water right.

CANCELLATION OF LICENSES FOR NON-USE OF WATER.

Under the provisions of the Irrigation Act this department should not permit any person to retain a water-right unless his works are in such condition as to allow him to put the water which he has been granted to a beneficial use, and hence when the owner allows his works to become ruinous and refuses, or neglects, to repair them, the department has no course open to it other than to cancel the water-right. In this respect the department realizes that the water-user may not require to use his ditches every year, and in judging the condition of the works has laid down what is considered to be a very fair and just rule upon which to base the judgment whether or not the works are in a sufficiently good condition of upkeep; that is to say, any licensee shall be held to have abandoned or ceased to use water whenever at any time he allows his whole works, or any part thereof, to fall into a state of such bad repair that he cannot, with the help that he usually employs on his establishment, put his works in a sufficiently good state of repair within one week's time to allow him to divert the proper quantity of water through them and apply it beneficially on his land.

It can readily be seen that the department must insist on this policy, as otherwise it would permit of persons gaining water-rights and holding them indefinitely without putting the water to any beneficial use, to the detriment of other persons who would make beneficial use of the water were it available for them.

FUTURE WORK OF THE IRRIGATION OFFICE.

An attempt has been made in the foregoing pages to deal with the work of the irrigation office in a general way only. For a detailed description of the progress of the work in the several districts reference should be made to the reports appended hereto which have been submitted by the district engineers. Several special features concerning the work have been taken up and are included in this report under separate headings.

As regards the future work of the irrigation office some comment may be not inappropriate in this report, as the commissioner, being in close touch with the practical end of the work, is probably in a better position to realize the necessities of the future than any other person.

DEPARTMENTAL CONTROL OF NATURAL RESOURCES.

The first point to be taken up is perhaps the most important one, and it is indeed most urgent, for it concerns the policy which the government is pursuing in investigating and controlling its natural resources. The matter may be tersely put by quoting the subject of an address by George H. Maxwell, director of the Pittsburg Flood Commission before the Nineteenth National Irrigation Congresss held at Chicago in December last, the subject of which was:—

> 'One and indivisible: forestry, irrigation, drainage, navigation. The rivers are the greatest asset of the nation *when regulated for all beneficial uses.*'

The last six italicized words are the ones to be studied. *'The rivers to be regulated for all beneficial uses.'* For the Canadian west the indivisibles might better be stated as: 'Forestry, Irrigation, Drainage and Power Production.' The point which it is desired to bring out clearly is that, as the rivers must be regulated for *all* beneficial purposes in order to develop their maximum potentiality, so should the regulation of all the beneficial purposes be carried out by one department, so that in studying any scheme of conservation every beneficial use may be given due consideration. Forestry, irrigation and drainage are at present in one branch of this department, under the director of forestry, but the investigation and regulation of power production is a separate branch. It is most important that this work should be included in the work of the irrigation office, or at least placed under the direction of the same head, the director of forestry. The water-power branch has its head-quarters at Ottawa, far removed from the scene of its work, and it has no organization in the west with which to carry out the necessary investigation. The irrigation office, on the other hand, has its head-quarters at Calgary, and has a well organized establishment and a staff of engineers familiar with western conditions. In concluding this topic the case of the Bow river is most illustrative. The government anticipates reservoiring the waters of this river and in doing so it must consider the claims of irrigation and also of power production. The claims of these two industries are antagonistic, in that irrigation requires the stored waters for use in the summer and power production requires the stored waters for use in the winter. The two demands have to be adjusted and balanced, and it would be waste of space to further explain that this question can far better be studied and adjusted within the confines of one branch of the department than by two separate branches, neither of them responsible to the other.

The people in the United States, as exemplified by Mr. Maxwell's paper, have after long years of bitter experience come to the conclusion that these matters are indivisible; cannot we save all the inevitable blunders and heart-burnings of the future by profiting by their experiences and having this matter adjusted at once?

DETERMINATION OF THE PROPER DUTY OF WATER.

There exists to-day an urgent necessity for investigations to be carried on by the government to determine the best methods for the practical application of water to field crops. In this regard the most important investigations necessary are those to determine the proper duty of water. The case is most concisely stated as follows: The government has arbitrarily determined and set forth the legal duty of water and, therefore, as a duty to the public and particularly to that portion of the public which this regulation concerns, it should have data to prove that the regulations in this matter are correct and proper. At present. data on this subject are woefully lacking. At the time that the duty of water was determined irrigation was in its infancy in western Canada, and the officials of that day could not do otherwise than base their judgment on conditions existing in other countries, but, as none of these countries have climatic and soil conditions exactly similar to those in Canada, it is necessary to carry on investigations in the sections of the country where the water is actually to be used. In addition to this indisputable fact, the great majority of investigations made in the United States (where the conditions are the most nearly parallel to our own) have been made on small patches of ground, and therefore have not been made under conditions exactly similar to the case of the practical irrigation farmer.

To properly determine the actual duty of water experiments should be made on large fields with the water applied in exactly the same manner as the farmer would apply it in practical irrigation; that is to say, let the farmers do the irrigating themselves on selected fields under the supervision of government engineers, and let the engineers collect and compile all the relevant data. This procedure should be supplementary to investigations made on any experimental farm, as the latter are looked upon with some suspicion by the farmers as being too technical and because the experimental farm always has, and employs. facilities in the way of farm machinery, &c., which many farmers cannot afford.

CLASSIFICATION OF LANDS FOR IRRIGATION.

Another matter to which attention should be called, and one which is in much the same line of thought as the preceding paragraphs, is the seeming necessity of making the duty of water elastic in order to suit the classification of the land to be served.

This statement, although made in a very few words, is one that opens up a very large field for argument and investigation, and will require a short explanation, to make the idea clear. The proper duty of water is a quantity, or perhaps more properly a ratio, signifying the relation between the water and the land, and defining the quantity of the former required to produce the maximum of plant growth on the latter. It can be readily understood that for any given locality this quantity must be governed by a number of different factors, of which the primaries are the seasons' climatic conditions, the kind of crop and the kind of soil. The first of these is a variable and can be placed only between the limits between which the climatic conditions are found to vary for the given locality, and the second is almost as variable because any ordinary soil will produce a great variety of crops, but the third—the kind of soil—does not change and can be classified within certain limits as regards the amount of water which it will require. It is impossible, within the limits of this report, to go into the question fully, but attention may be drawn to one clear-cut case where a classification would be very beneficial. There are certain gumbo clay lands, generally lying along small creek-bottoms, which are highly benefited. in fact changed from a non-productive soil to a good hay-producing soil, by the application of from four to eight inches of water. In fact, this class of soil, on account of its density, will not take up a greater amount of water than this. These lands occur most frequently in sections where the water-supply is very limited, and where very often the supply is not sufficient to put the legal duty of water on them. Therefore. these lands, under the present regulations, must be left absolutely unproductive, and no irrigation rights can be granted because the rule is hard and fast that unless the applicant can show that the water-supply is adequate to serve the land with the legal duty he cannot get a license to divert the water for irrigation purposes. A great benefit would result from a classification which would allow of the use on these lands of a smaller quantity of water than the present legal duty. The one very grave drawback to any system of classification would be the opening given to prospective purchasers of land under the irrigation system to attempt to obtain an improper classification. This, however, would not apply to applicants who already own the land upon which the water is to be applied.

To show that these statements are not without precedent, the following extract is quoted from a report by Mr. Don H. Bark, Engineer in Charge of Irrigation Investigations in Idaho, U.S.A.:—

> 'The texture of the soil as regards porosity has more to do with the amount of water used than any other one thing. It has been found that adobe soils may be irrigated with the total application of but two or three acre-inches, while in some instances, from one to two acre-feet are required to spread over and thoroughly irrigate an acre of very gravelly soil.'

PROVINCIAL CONTROL OF NATURAL WATER RESOURCES.

In view of the possibility that the Dominion Government may turn over to the provincial governments the administration of their own natural resources, it may be permissible to record here a warning of the great troubles and difficulties that will be met with if the provinces of Alberta and Saskatchewan attempt each to control its own water resources. In dealing with rivers or any question of water conservation it is impossible to draw imaginary lines for administrative purposes. In the United States, which must always be our great object-lesson in these matters which concern the administration of the great natural resources of our virgin territory, it has been found that the greatest obstacle to all the comprehensive schemes of water conservation has been the fact of the separate control by each state of its own waters, and at this late date, after trying every other plan, the consensus of opinion is that the only way in which these matters can be efficiently handled is by the co-operation of the several states. Each province can, if such a policy be adopted, control its own mines, or timber, or lands, but the rivers can be administered, for the development of the maximum of good, only by the Dominion government, which recognizes no boundaries within all its great territory.

NECESSITY FOR INCREASING AND DEVELOPING THE WORK.

The last, but not the least, important point to which attention is here drawn is the great necessity of increasing and developing the work of the irrigation office. The greatest difficulty of to-day is the lack of information which should have been gained in the past, and if the scope of the work of to-day is not very soon greatly increased it will not be possible to keep abreast of the times in supplying that information regarding our great natural water resources which will every day in the future be demanded more strongly by the rapid settlement that is going on at the present day. That this work is not demanded by the public at large is no criterion of its worth, because the general public does not realize the importance of that work. That body of men who are in the best position to understand the necessities of the case, viz.: the Western Canada Irrigation Association, show a keen appreciation of the need of the work by the resolutions that they have passed at their annual meetings for the past two years. The resolutions which refer particularly to the work of the irrigation office are the following, which were passed at the convention of 1911:—

> No. 3. Whereas a knowledge of the practical duty of water for various crops has a most important bearing on irrigation development, and whereas information upon this important question available in any of the provinces of Alberta, Saskatchewan and British Columbia is vague and incomplete,
>
> Therefore, be it resolved that the attention of the governments interested should be directed to this important matter, and that they should be urged to carry out a thorough system of investigation to determine the duty of water in the different provinces and for the different crops, so that such duty may then be determined with approximate exactness.
>
> No. 4. Whereas an accurate knowledge of the location and quantity of water supply available is the basis of irrigation development, and
>
> Whereas the matter of topographical and hydrographical surveys to determine the location and quantity of such water-supply and the proper methods of conserving it must be undertaken by the government administering the law relating to the use of such water;
>
> Therefore, be it resolved that this convention urges strongly upon the Dominion Government the importance of making the necessary appropriation and providing the necessary staff to continue in an intelligent and systematic manner the work of gauging all streams of water-supply and location of all sites suitable for reservoirs for the storage of water, initiated a number of years ago.
>
> No. 6. Whereas the conservation of water for irrigation purposes by companies and individuals, as at present carried out, does not admit of the whole available area in each district being brought under cultivation; and whereas the conservation of water by the government would be the means of developing such areas to the fullest extent, and assuring absolute permanency of supply and materially increasing the security to bondholders,
>
> Be it resolved that the governments in which such districts exist be urgently requested to give the matter their serious consideration, and to put such system into operation at the earliest possible date.

APPRECIATION OF THE WORK OF THE STAFF OF THE IRRIGATION OFFICE.

In concluding this part of the report the Commissioner wishes to express his thanks and appreciation to every member of the staff for their hearty and conscientious co-operation, which alone has made it possible to carry on the successful season's work during the year 1911.

Respectfully submitted,

F. H. PETERS,
Commissioner of Irrigation and Chief Engineer.

No. 39.

REPORT OF THE MAPLE CREEK DISTRICT, BY R. J. BURLEY, B.A.Sc., DIVISION ENGINEER.

Department of the Interior, Irrigation Office.
Calgary, Alberta, April 1, 1912.

F. H. Peters, Esq.,
Commissioner of Irrigation,
Calgary, Alta.

Sir,—I have the honour to submit herewith my annual report of the season's operations in the Maple Creek district.

For the purposes of the work of irrigation inspection, the district was divided into two parts, roughly along the western boundary of range 26, west of the 3rd meridian, Mr. F. T. Fletcher taking the eastern section, extending to range 16, west of the 3rd meridian, and from the international boundary to the north boundary of township 14, while Mr. W. A. Fletcher took the western portion, extending to range 9, west of the 4th meridian, and from the international boundary to township 15.

The levelling party, under Mr. W. H. Greene, started from the old government bench mark No. 118 in the town of Maple Creek, established by Mr. Gibbons in 1896, one leveller running westward along the north boundary of township 11 and the other along the north boundary of township 10 until the fourth meridian was reached near the village of Walsh. From this point careful levels were run along the fourth meridian by one leveller and checked by the other, the allowable difference in checks being 0.02 feet by the square root of the distance in miles. This work was done with great care in order to establish a base line of precise levels from which other level lines can be developed in the future with a minimum probability of error.

PARTIES.

The parties consisted of an engineer in charge, an assistant, two rodmen, one teamster and a cook, except in the case of the western inspection party, where Mr. W. A. Fletcher had no assistant and only one rodman. The inspection party in the eastern district was equipped with four tents, one wagon, two democrats and eight horses, together with the necessary cooking utensils, tools, &c., while the one in the western district had three tents, one wagon, one democrat and four horses. The level party had four tents, one wagon, two democrats and six horses, together with the other necessary equipment for six men.

After the parties had been properly outfitted at Maple Creek they separated, and the inspection parties moved as outlined in the reports of Messrs. F. T. and W. A. Fletcher, with the idea of making a circuit of their respective districts in such a way as to be in the vicinity of Maple Creek in the fall when the weather became too severe for further work.

In carrying out the inspection work next season I would recommend that the party in the western district be increased in size to correspond with the one in the eastern district in order to meet the increase in the number of schemes and to properly handle the traverse work which is now being done. In the past this work has been carried on more or less spasmodically, owing to the importance of the inspection work and to the limited size of the parties in this district, so that there are a large number of schemes sufficiently advanced to permit of traverses being made. In a great many cases it will also be necessary to define accurately the ditch right-of-way and the irrigable area before the license is issued upon the completion of the scheme.

GENERAL CONDITION OF IRRIGATION WORKS.

In watching and considering the progress of small private irrigation schemes for several years, one fact that has been very noticeable is the apparently decreasing rate of progress per year made on a great number of the schemes. In some cases this arises from pure carelessness or inability on the part of the applicant to do the work, but in the greater number of instances it is doubtful if this explanation will apply, more especially where the applicant has used water on some portion of his land and is favourably impressed with the benefits derived therefrom. In the case of the great majority of such ditch-owners in this district it is necessary to make the irrigation scheme pay its own way; that is to say, the owner usually endeavours to complete the intake and the carrying part of the system as soon as possible, in order to get the water on a portion of the irrigable land so that the produce from this part may help to pay the expenses of the remaining work. From this it can be seen that the scheme will, at first, be very imperfect and the results from it proportionally poor. Naturally, the next effort is in the direction of the best results for the least outlay and an effort is made to improve conditions upon the land already watered, so that the tendency is to neglect the main ditches and works and to concentrate the working force upon the land first covered until it has been put in good condition, when another section of the scheme is taken up. As the proper handling of even a comparatively small irrigated tract takes a great deal of time and attention, the second section does not progress so fast as the first, with the result that, in schemes involving several sections, or even quarter sections, the rate of progress on the last portions of the main works appears to be very slow, although in reality more work may actually be put into the scheme per year than was the case at first.

This brings up a somewhat difficult problem for the inspector to decide in making his recommendation for extensions of time for the completion of the works, for there is no doubt that the irrigator who is actually using the water is doing more to develop the country than one who merely finishes the main canal and works so as to pass inspection. As has always been the case in a new country, the development of irrigation is only perfected by experiment and actual use, and the owners can only learn to handle the water intelligently by these means, even where they have had experience in a different part of the world and under different conditions.

From this argument it can be seen that it is very probable that the applicant who is apparently making slow progress will have his scheme in first-class working order long before the man who has rushed his main works, laid out, possibly, without even a preliminary survey, but has made no study of the conditions under which he will have to apply water. In this latter case it frequently happens that the main works are constructed with little regard to the requirements of the land under them, so that the lateral systems are much more extensive and require much more work than the main system, with the result that the applicant is likely to become discouraged before any benefits are actually attained. As soon as the incentive of gaining the water license, or patent for the land purchased, is removed, he will very often allow the scheme to fall into disrepair; on the other hand, the man who completes his scheme in sections and actually irrigates during the time he is working at it obtains such results that he is satisfied to put more time and expense into the works.

As will be noted from the reports of the inspectors, there were some fourteen schemes that passed inspection and were recommended for license last season and, while this may seem a small number compared to the number of applications on file, generally speaking the progress made was very good, despite the most unfavourable season, if it be judged from the standpoint of the preceding paragraphs. The most noticeable improvement in a great many schemes has been in the adoption of better methods in the application of water and more elaborate distributary systems. The result of this method of working is that, when a scheme is completed, the owner is in a position to get the best results obtainable out of it, owing to the benefit derived from the experimental work done during construction.

On the other hand there are some applicants (comparatively few, fortunately), who appear to do as little as possible each year and who expect to be allowed to continue in this manner indefinitely. The only course open to the department in such cases is to give the irrigator fair notice, and, in the event of the works not being completed, to cancel the authorization.

IMPROVEMENT OF CONDITIONS.

In considering the improvement and development of irrigation in this district, it would appear advisable for the department to endeavour to direct it along the following lines, viz.:—

(1) Improved Distributary Systems, Revised Grades, &c.

This is probably the first improvement that will occur to the individual owner, as in making it he is acting independently and is getting results in the quickest time, with the least expenditure; also, as the result of personal experience, he sees the defects in the original system and will take a greater interest in rectifying them and in getting the best possible results from his own efforts.

(2) Reservoirs.

In a district where the stream-flow is intermittent, one of the first things to engage a practical irrigator's interest, after he has his own scheme in good working order, is some method of holding up water at flood periods for use during low-water or dry periods. This is a matter which will usually demand co-operation between two or more applicants and, from that fact alone, the development of this phase of the irrigation problem is likely to be delayed for some time. In a few cases it is possible for one owner to provide reservoirs for his own sole use, but in the great majority of cases either the expense is too great or the main ditches are at too low an elevation to fill a reservoir for use on the lands under them. In the latter case it would be necessary to arrange an exchange sysetm, whereby a prior applicant lower down the stream would give up his priority and draw his supply from the reservoir.

In the case of large reservoirs it would usually be necessary for all applicants, who hold lands capable of being irrigated, to combine in order to build the necessary structures and then to apportion the water fairly among them.

(3) Mutual Arrangements for the Division of Water and Construction of Works.

It will be found that when crop rotation is introduced on the lands irrigated the applicants growing different crops will require water at different times and the ideal arrangement is to supply these schemes from reservoirs, charging up the water supplied to them as it is taken, until the total appropriation for each system is exhausted. In cases where no reservoir is available a great improvement can also be effected by one applicant handling the whole available flow until he has thoroughly watered his crop and then turning the stream over to the next man. It also frequently happens that a number of water-users can combine and put in a system which would be out of the question for one or two men, so that in this way a large amount of land could be reclaimed that would otherwise be left in an arid condition. In many cases, too, the works of one applicant are at a sufficient elevation so that the water from his ditches can be run over the land of another whose works and intake are too low to water it.

As the above arrangements depend wholly upon mutual agreement, it will be seen that this will be one of the last developments to take place in the irrigated districts, but they must be made before the use of water will reach its full efficiency and, as has been the case in older irrigated districts, the consideration of the greatest benefit to all concerned will in time, no doubt, bring about some such state of affairs.

(4) Replacing Temporary Structures with Permanent Ones.

This will probably be the last development to be taken up by the irrigators generally, and such work will not be undertaken until irrigation has made the land of sufficient value to warrant a very considerable expenditure per acre to put the works in a permanently efficient state. A further point in this connection is that of the owner's ability, financially, to erect such structures, and it may be said that the greater number of them must be satisfied with works of a more or less temporary and inefficient nature until such time as they can afford to replace them with good structures.

The points taken up here are merely an expression of opinion regarding the general trend of irrigation development in this country and it is clearly recognized that a good many years must elapse before the improvements outlined will be widely adopted. No doubt there may be many legal complications which it will be the duty of this department to adjust, as far as possible, but, owing to the excellent nature of our Irrigation Act, the field in which such complications can arise is very much restricted in comparison with the older districts in the United States, for example, where the laws were devised to cover difficulties as they arose and where the older appropriators were, only too often, a law unto themselves.

It can be seen that, if the development follows along the course outlined, none of the schemes will be at their greatest efficiency for some years, and this is undoubtedly true so far as the Maple Creek district is concerned. It remains for the department to encourage improvements and, if at all possible, to direct the attention of all the irrigators to improved methods; to encourage co-operation and to commence some campaign of education regarding the best methods to use and the results obtainable from irrigation. This knowledge is bound to come in time, but, unless assistance is given, the process is an exceedingly slow one.

RESERVOIRS.

When natural hay ceases to be the main object of irrigation, the necessity for reservoiring will become very forcibly impressed upon the irrigators in this district, as, while flood-water irrigation is quite suitable for hay lands and is of great assistance in growing grain when it is available at a suitable time, this method of applying water will not be of any great value where intensive farming is practised, nor where alfalfa is grown. As but very few of the schemes have water available at all times, reservoiring is the only solution.

The possibilities for improvement by this means are well illustrated by the success of irrigation in the Cache la Poudre valley, in Colorado, where, at the present time, there are over 200,000 acres in highly improved farms being irrigated from a comparatively small stream with a minimum mean monthly flow of about 70 cubic feet per second and a maximum of about 2,000 cubic feet per second. (Figures taken from Bulletin No. 33, of the State Agricultural College of Colorado.)

Judging from the rapid development following the installation of reservoir systems there during the early '90's it is only to be expected that irrigation will gain greatly in importance when once such systems are started in this country.

As things stand at present the larger part of the run-off is lost each year, and, as a result, a great many of the schemes have to be satisfied with a scanty water supply, or with one irrigation often available only at a poor season of the year, so that, naturally, the best results are not obtained.

Other points in connection with reservoiring such as the necessity of surveys being made and the construction of large basins by the government, have been taken up in previous reports and need not be dwelt upon here, but, if any dependence is to be placed upon the experience of irrigators in older irrigated districts, it would appear that this is one of the most, if not the most, important question to be dealt with under our Act, and the sooner it is seriously taken up the sooner we may expect the best results from irrigation.

GAUGES IN DITCHES AND STREAMS.

This work was commenced last season and was found somewhat difficult to carry out properly and at the same time to satisfy the ditch-owner as to the correct location for the rod. From the standpoint of obtaining good results for use in this office, it was necessary to place the rod above all laterals and also in such a position that the opening and closing of head-gates or diversion gates would not materially affect the accuracy of the readings. From the standpoint of convenience to the ditch-owner, it was necessary to place the rod as close as possible to his place of residence as, otherwise, it is very doubtful whether the readings could be relied upon. The result of such conflicting conditions was, necessarily, a compromise, and in some instances it is doubtful whether the best cross-sections were obtained. However, under the existing circumstances, the engineer followed what was, in his judgment, the best course. No doubt, as this work is carried on and the irrigators become more familiar with the objects of it, we shall be able to get better results from cross-sections and more reliable readings from the owners.

In all, some twenty-four stations were installed last season and descriptions were forwarded to this office. They were placed on the ditches in use, taking water from the streams upon which there will be the greatest likelihood of dispute in the future, with a view to getting records before any trouble arises in order that the department may be in a position to decide fairly between applicants, should occasion arise. This work will be carried on during the coming season with the same end in view, and it is hoped that stations will be established on all completed ditches by the end of the year.

In addition to the ditch gauge rods, it will become necessary in the near future to establish gauge rods on the streams near the point of intake of each ditch, marked in such a way as to show at what stage the applicant is entitled to take water. This matter has been discussed in previous reports, but it is mentioned here in view of the difficulties continually arising between applicants and in view of the protests made by riparian owners, particularly along Battle creek.

INSPECTING ENGINEERS' REPORTS.

In the report of Mr. F. T. Fletcher, it will be noted that a start was made last season at placing permanent reference points, or bench marks, at or near the intake of some of the ditches. This work was undertaken with the idea of eventually obtaining profiles of all the ditches, referred to the bench marks, and finally connecting up these to a general contour survey of the country. Such marks are also very necessary in the establishment of gauging stations, and will be connected up with the regular station bench marks as they are put in, while, in the meantime, they give the inspector a check upon what work has been done in the way of lowering, or raising, the ditch grade-line, dam, head-gates, &c., from year to year. It is proposed to carry on this work in a similar manner during the coming season.

The work of traversing the schemes was somewhat more extensive last season than in previous years, 181½ miles of traverse line being run. The majority of the larger schemes are now traversed, especially in the eastern district, and it is hoped that a large number of the smaller schemes will be done this year. In the majority of cases schemes are not now passed until careful traverses have been made, correcting all errors in the original plans, so that the licenses can be issued for the correct acreage only.

The following summary shows, in tabulated form, the main details of the season's work, in addition to that shown on the reports of Messrs. F. T. and W. A. Fletcher:—

Number of inspections	44
Number of reports submitted	72
Number of days of rain or snow, exclusive of Sundays, April 29 to November 25	58
Number of miles driven	3,049

Respectfully submitted,

RALPH J. BURLEY,
Division Engineer.

No. 40.

REPORT ON THE WESTERN SECTION, MAPLE CREEK DISTRICT, BY W. A. FLETCHER, B.A.Sc., INSPECTING ENGINEER.

DEPARTMENT OF THE INTERIOR, IRRIGATION OFFICE.
CALGARY, ALBERTA, February 27, 1912.

F. H. PETERS, Esq.,
Commissioner of Irrigation,
Calgary, Alta.

SIR,—I have the honour to submit the following report of my work for the Irrigation Branch of the Department of the Interior, in the western section of the Maple Creek district during the season of 1911.

On May 8, I took charge of my party at Maple Creek. A few inspections were made from the large outfitting camp located near the town, and the remainder of the time spent there was consumed in purchasing supplies, breaking horses and completing the outfitting of the party. The actual field work was commenced on May 29, when our first working camp was established at a point some eighteen miles southwest of Maple Creek.

The territory included in the district allotted to me was covered in a manner very similar to that employed in the previous year, although the route followed was somewhat different. Camps were successively established at the most suitable places, having regard to proximity to the work and at the same time to securing good grazing, water and fuel. From each of such camps all work within a ten or fifteen-mile radius was covered, after which the party was moved to another base in a fresh locality. This plan was adhered to throughout the season, with two exceptions. No good camping place was known to me in the neighbourhood of Medicine Hat, and the six schemes in that locality were inspected from that town in three days. Seven schemes on Manyberries creek, around Pakowki lake, and on Sevenpersons coulee were inspected by taking one man and a light team on a week's trip from the camp stationed at Eagle Butte. These last mentioned schemes were too widely separated to justify establishing a camp in their neighbourhood and working from the same without considerable loss of time, especially as only inspection work was required.

The remainder of the district was worked from camps established successively at the following ten points: On Downie creek; on Fourmile coulee near Coulee post office; on Sixmile creek at a point about a mile above its mouth; on Battle creek below Wilson's ranch; on Middle creek at Jahn's ranch; on Lodge creek at a point just east of Lynch's ranch; on Lodge creek at W. Mitchell's irrigation scheme; on the irrigation scheme of Jas. English; at Eagle Butte post office, and at Many Island lake.

The total number of inspections made by myself was ninety-three; of this number twenty-three were of licensed schemes, fifty-four of schemes authorized and under construction, and sixteen were new applications. There were, in addition, two applications for permission to extend and enlarge existing schemes.

All of the licensed schemes, with the exception of five, were found in good working condition, and in actual use. The principal crops in evidence were blue-joint hay, oats, potatoes, and some small areas of alfalfa. Although the rainfall was unusually heavy during the season, there was nevertheless some very hot dry weather in the month of June, when those licensees who had water found it advantageous to do some irrigating, more especially on hay lands.

Where grain crops, chiefly oats, are being raised, the almost invariable rule seems to be to have the ground ploughed and worked up during the fall previous and then to give it as thorough a watering as possible with the spring floods. As soon as the soil becomes sufficiently dry, the seed is put in. In many cases snow water from dry coulees is being used to great advantage in this way, both on licensed schemes and on authorized schemes where the works are fairly well advanced. This makes a cheap method of irrigation where topographical features are favourable, and the results are extremely gratifying. In all such cases which came under my notice last year there was sufficient moisture conserved in the seed-bed to have carried the crop through to maturity without aid from the rains of July and August. In fact, these rains were rather a detriment to such irrigated areas, since growth was prolonged in many cases until killed by frost. This would seem to show that one thorough flooding in the spring is sufficient to ensure a fair crop on broken land in any ordinary year, and that applications for water-rights based upon this method should be shown some consideration.

Generally speaking, the larger schemes irrigating two hundred acres and over appear to be the more energetically and profitably operated, although one of the most successful irrigation projects in the district is a small one on Bullshead creek, near Coleridge. From fifty acres of land irrigated on this scheme over $3,500 worth of green feed, grain, vegetables and garden truck was realized in 1911.

While considerable progress was made on the authorized schemes, much more would have been done had the season been more favourable. Since almost all the works are being constructed by the applicants themselves, and since the regular farm and ranch work must be carried on, a wet season, such as that of last year, not only made the ground too wet for earthwork for a great deal of the season, but also prolonged the haying and harvesting to such an extent that few opportunities were left for ditching when dry spells did occur. However, fair progress towards completing authorized schemes was made. The works on four were completed, passed inspection satisfactorily, and the schemes were recommended for the issuing of licenses. Thirteen others were found to be almost finished but needed some small changes and improvements and could not be recommended until such were effected. Two of these last were reported as finished late in the season but could not then be inspected on account of bad weather late in November; these are being held over for inspection in the spring of 1912.

Of the eighteen new applications dealt with, nine included the purchase of land, one was for domestic purposes, and eight of the applicants already owned the land to be watered. It is seen, therefore, that considerable faith in the value of irrigation is becoming manifest throughout the district, and that something else besides the acquisition of land is desired.

Complete traverses were made of eight schemes, accurately locating the works and irrigable areas and defining the extent of the latter. Portions of four other schemes were traversed to determine and locate the required right-of-way. In all, sixty-five and one-half miles of traverse lines were run during the season. Traverses for right-of-way on three other schemes could not be made, owing to the works not being sufficiently far advanced to locate the same with any degree of accuracy. Three further traverses of entire schemes which were required could not be made owing to the smallness of the party and the limited time available.

Gauge-rods were installed on all ditches specified in the instructions of the district engineer. Altogether, seven of these were placed. Discharge measurements were taken where it was possible to do so, and discharge curves for the ditch-rods were obtained. These, with descriptions of the stations, were forwarded to the Chief Hydrographer at Calgary.

A small Price electric current-meter and two steel weirs, of crest-widths of 15 inches and 36 inches, respectively, formed part of the party's equipment and stream measurements were made wherever convenient. Not many gaugings were taken, however, owing to the pressure of the regular work of traverse and inspection.

As previously stated, much unfavourable weather was encountered throughout the summer and fall. This caused many delays in the field, not only in the actual inspection and traverse work, but also, owing to the heavy trails, in the transport of the outfit from camp to camp. In a wet season, such as that of 1911, one team proved entirely unable to handle the transport wagon with any proper degree of facility, making extremely slow progress, and, at the same time, being taxed much beyond their working powers. Two teams, one each for a democrat and transport wagon, are not enough for the efficient handling of a party over the rough and broken country included in this district and an extra team would greatly expedite the carrying on of the field work. I would also recommend that a saddle be added to the equipment, as many occasions arise when a saving in both time and horseflesh could be made, in such matters as obtaining and forwarding mail, rounding up loose horses, &c.

All but one inspection had been made, when extreme cold, accompanied by a heavy snowfall, occurred on November 7, and work was held up for nearly ten days. As soon as fair weather returned this last inspection was made, and, after storing part of the outfit at Many Island lake, the remainder was moved to Maple Creek, which town was reached on November 18. The remainder of the equipment was stored there and the party disbanded on November 20.

The following is a list of the most essential features of the season's work:—

Number of inspections made	93
Reports submitted	99
Miles of traverse run	65·5
Field plans submitted, including sketch plans	23
Number of days with rain or snow, exclusive of Sundays	63
Miles driven with team and democrat	2,200

Respectfully submitted,

W. A. FLETCHER,
Inspecting Engineer.

No. 41.

REPIRT ON THE EASTERN SECTION, MAPLE CREEK DISTRICT, BY F. T. FLETCHER, B.A.Sc., INSPECTING ENGINEER.

Department of the Interior, Irrigation Office,
Calgary, Alberta, March 1, 1912.

F. H. Peters, Esq.,
Commissioner of Irrigation,
Calgary, Alberta.

Sir,—I have the honour to submit herewith a report on irrigation inspection work in my district for the year of 1911.

On May 8th, I took charge of my party at Maple Creek, and, after purchasing the necessary supplies and equipment, moved camp to Hay creek, from which point the actual survey and inspection work commenced. The route followed by the camp and the methods employed in the work of inspection and survey were the same as in previous years, viz.: all work was done from a centrally located camp. Camps were established successively at the following locations:—

Hay creek—May 29th.
East branch Bear creek—June 17th.
Skull creek—June 29th.
Pollock's butte—July 31st.
Galienne coulee—August 15th.
North fork Frenchman river—August 26th.
Fairwell creek—September 15th.
Belanger creek—October 4th.
Battle creek—October 13th.
Belanger creek—October 25th.
Maple creek—November 3rd.

On account of extremely cold weather and deep snow the party was disbanded on November 3rd.

HYDROGRAPHIC WORK.

This work consisted chiefly in measuring small streams on which, as yet, there are no regular gauging stations. A few measurements were also taken at regular stations, but, as the stage of stream-flow during the summer months remained fairly constant, no effort was made to make many of these measurements, as such would only be duplicating the regular work of the district hydrographers.

An effort was made to obtain as accurately as possible the value of s (sine of slope) for the larger streams in the vicinity of Maple Creek, the object being to obtain a fairly accurate value of the co-efficient of roughness, n, to be used in calculations involving Kutter's and Chezy's formulæ. The slope s was usually obtained for a chained distance of half-mile above and half-mile below the gauge on the stream, the difference of elevation of the water-level at these points being ascertained. It was thought that by substituting this value in Kutter's formula, and using different discharges and corresponding cross-sectional areas obtained by gaugings of stream at these stations, a value of n could be obtained. Unfortunately, it was found extremely difficult to obtain a satisfactory value of s, which could be used for this purpose, for the following reasons:—

(1) The streams are all very small and the low-water channel narrow. At flood stages the water overflows the banks, and, hence, the length of channel is greater at low-water than at high-water, and the value of s therefore changes slightly.

(2) The value of s changes very rapidly on all of these streams; the fall in the half-mile below the gauge on every stream was found to be much less than in the half-mile above. The value of n found from the above value of s and known values of r (mean radius) and q (discharge) should be, however, much more accurate than an assumed value, and would certainly be a good check on such assumed values.

In addition to stream measurements, several gauging stations were established on ditches. Your instructions regarding the establishment of these stations were followed as closely as circumstances permitted, and hence a description of methods employed and kind of station established is unnecessary. It was found impossible, on account of other work, to establish stations on all the ditches, and gauges were placed on the larger schemes only. In all, seventeen gauge rods were installed and descriptions were forwarded to the Chief Hydrographer.

The instruments used in hydrographic work were a small Price electric current meter and two weirs, 15 inch and 36 inch crest.

BENCH MARKS.

A commencement was made at the work of establishing bench marks on the different schemes. The elevation of the intake of the ditch was referred to this bench mark and, in many cases, a profile of the ditch was taken with this bench mark as reference. The bench mark established consisted either of a stout wooden peg driven near the intake of the ditch and accurately located, or the highest point of some heavy, immovable rock, and this elevation referred directly to the nearest mound-pin.

INSPECTION WORK AND TRAVERSE.

All work of inspection was done by myself, personally, my assistant helping in necessary survey work in connection with the same. In all, 108 inspections were made and reports forwarded to your office. The office-work connected with this work of inspection is fairly heavy, but, outside of rainy days, when field-work was found impossible, involved my remaining in camp only some ten additional days. This work was greatly handicapped by the bad weather in the latter part of the season, and on this account it was found impossible to make any second inspection of schemes in my district.

Considerable traverse work was done this season. All schemes valued and recommended for license, with one exception, and several other schemes, the location plans of which were found to be very inaccurate, were traversed. One hundred and sixteen miles of traverse were made during the season, including the traverses of creek-courses, lines bounding irrigable areas, and right-of-way traverses. This necessitated the preparation of thirty-six traverse plans, which work was done by my assistant and his rodman. The necessary calculations in connection with the traverses and the drafting occupied him sixteen days, exclusive of rainy weather. In addition to these plans, some ten sketch plans were forwarded to your office.

PROGRESS OF WORK.

During the past season seven schemes were recommended for license. In addition to these, since the close of the season, four schemes have been reported to the office as complete and ready for final inspection. Considerable progress has been made in the construction of works in the larger schemes in the Cypress Hills and in all cases the work being done is first-class.

APPLICATION OF WATER.

Practically all of the schemes at present authorized and licensed depend almost entirely on flood-water for their supply. On this account the main object in the application of the water is the growing of fodder, either natural grasses, such as blue joint, or cultivated grasses, such as bromus, timothy or rye grass. Experiments by several of the irrigators are showing that it is quite possible to make good use of spring-flood water in promoting the growth of grain. Mr. W. H. Moore, of Gull Lake, whose source of supply is mainly spring-flood water, prepared his land for seeding and then flooded it early in April. The land was seeded as soon as the water applied had soaked away sufficiently to permit of the seed-drills being used. The result in his case fully justified the experiment. The crop grown was spring wheat and oats.

Messrs. Stearns Bros. and C. E. Stearns, on Jones' coulee, applied spring-flood water to a part of their land before seeding, and the land thus irrigated raised the only crop they harvested last year. These and other experiments show that, where the season is very early, as is the case in many parts of the Cypress Hills, spring-flood water can be used to advantage in raising crops of grain, though it should be borne in mind that in the event of the season being late and very wet, the application of this water might result in souring the land and retarding early growth.

The more successful application of water for growing crops appears to be in the fall of the year. This, of course, is only possible where the schemes are situated on permanent streams in the Cypress Hills, and is especially adapted to this region because the flow of these streams is much greater throughout October than in the summer months. This time for applying the water has been successfully tried by Messrs. Morrison Bros., on the Frenchman river.

To augment their supply of water many of the irrigators are constructing small reservoirs or employing dyking systems, where feasible, to irrigate their hay-meadows. All such efforts should be encouraged in every way, as they prove of value not only to the person constructing such works, but also to other irrigators on the same stream

The following summarizes the work of the season:—

Number of inspections	108
Number of reports submitted	108
Number of days of rain or snow, exclusive of Sundays (May 8 to November 25)	50
Number of miles traversed	116
Number of field-plans submitted	46
Number of miles driven	2,400
Number of gauging stations established on ditches and descriptions prepared	17

Respectfully submitted,

FREDERICK T. FLETCHER,
Inspecting Engineer.

No. 42.

CROP REPORT, MAPLE CREEK DISTRICT, BY R. J. BURLEY, B.A.Sc., DIVISION ENGINEER.

Department of the Interior, Irrigation Office.
Calgary, Alberta, April 1, 1912.

F. H. Peters, Esq.,
Commissioner of Irrigation,
Calgary, Alta.

Sir,—I have the honour to submit herewith a report on crop conditions in the Cypress Hills district for the year 1911. In this report much of the information is of a general nature, as it is practically impossible to get details of yield, time of planting and time of irrigation, from the majority of the ranchers, who do the greater part of the irrigation, owing to the fact that they seldom thresh their grain and usually make a rough estimate only of the yield in the case of hay, vegetables, &c.

The considerable differences of elevation throughout this district cause great differences in the climate of the various portions, so that on the Elkwater plateau, with an elevation of about 4,600 feet above sea-level, there is frost practically every month in the year, while along the railway track from Medicine Hat (elevation, 2,171 feet) to Maple Creek (elevation, 2,473 feet) and eastward, there is seldom frost between May 1 and September 10. On the other hand, the higher points appear to have the greater precipitation and the growth of natural grasses is much heavier and longer than is the case on the plains below.

The soil on the top of the Cypress Hills plateau is, as a general rule, a very dark vegetable loam, which usually appears to be underlaid with gravel, gravel and clay, or cemented gravel, while on the slopes of the hills and on the plains almost any class of soil can be found from drifting sand to the heaviest 'gumbo' clay. As a general thing the soil on the north side of the hills is a more or less light, sandy loam, excepting in the creek valleys, where it is usually a heavy clay, apparently in the nature of an alluvial deposit. On the south side, however, a somewhat different state of affairs is found, as the greater part of the soil appears to be a clay loam, somewhat stony in places and, upon the whole, of a poorer quality than that on the north slope. The stream valleys are, in most cases, similar in nature on both sides of the hills.

As practically all the irrigation is confined within the limits of the valleys, it will be seen that from the standpoint of irrigated crops it is necessary to deal with a very heavy, sticky, class of land, having an impervious subsoil and more or less poor drainage facilities in the majority of cases. Naturally there are some notable exceptions to this rule and these will be dealt with later on in this report, but in the case of the majority of schemes the land, before water is applied, is baked very hard, has very little grass, but a more or less heavy growth of sage and greasewood. When water is applied, however, the sage is killed and the natural blue-joint grass springs up thickly, forming excellent hay-meadows within two or three years. On the north side of the hills, principally north of the Canadian Pacific Railway line, there are between twelve and fifteen thousand acres of this class of land under irrigation for natural hay each year, and, as a general rule, fairly good results are being obtained, the yield being between one and one and a half tons per acre. This yield could undoubtedly be increased if better methods were adopted, as at present the owners, holding, as they do, large tracts of land, are quite satisfied to turn on the water when it is available, and to cut whatever crop there is when it is ready. There are many features of this class of irrigation that could be greatly improved, as, for example, the dyking of the flats to hold water for a longer period. Another cause of trouble in such hay-meadows is the thickening of the grass roots under irrigation until they finally choke each other out and stunt the growth, thus cutting down the yield very materially. This can be overcome to a great extent by discing the sod from time to time, thus giving a better and looser root-bed. The condition occasionally met with on the south side of the hills, but seldom seen on the north side, is that of a heavy growth of 'fox-tail' grass, choking out the blue-joint and rendering the meadow useless. This appears to be encouraged by the application of too much water and by allowing water to stand on the land for long periods. Possibly the standing water kills the good grass, giving the other a chance to grow, but, in any event, it renders the meadow practically useless, and the only remedy appears to be leaving the land dry for several seasons or ploughing the sod under.

On the plateaux or on the higher slopes of the hills the great trouble is with early frosts. However, it may be said that oats and barley usually ripen, but wheat is frequently damaged. Timothy can be grown successfully, and Mr. Jacob Armstrong, near the head of Fairwell creek, is making a success of rather a novel experiment. Three years ago he started discing timothy seed into the prairie sod and this grass is now growing very well. He expects to be able to turn a large area of prairie land into timothy in this way, without going to the expense of breaking it, and it would appear that his expectations will be realized, judging from the showing made last year. He is also experimenting with alfalfa, but as yet has got but little past the experimental stage, although very successful up to the present.

Practically all the common varieties of vegetables are grown with fair success, but during some seasons the less hardy varieties are a failure on account of frost. If this difficulty is overcome, as more land becomes broken, there is no reason why these crops should not be very successful. So far, practically all the vegetables grown are for the owner's use only, and there are very few areas of any size under such crops. On account of the elevation the nights are much colder on the plateaux, so that all crops are considerably later than is the case on the lower land.

CROPS GROWN UNDER IRRIGATION.

While the staple crop on the greater part of the irrigated land in the district is natural hay, it has been demonstrated that timothy, rye grass, redtop, bromus, clover and alfalfa can be grown successfully under irrigation if properly handled. Up to the present the crop of native blue-joint has almost satisfied all demands, and it will always command a good price per ton on account of its excellent quality, so that the owners have been satisfied with a low yield per acre rather than to go to the expense of breaking, preparing and seeding the land to some other crop. No doubt, in the future, as the supply of bench hay runs out and the demand becomes greater, owners of irrigated flats will realize that they are losing money by keeping their flats seeded down to a low-yielding crop and will begin to do some additional work to obtain a better one.

With regard to grain crops it may be said that practically all the cereals are grown to some extent, but oats appear to be the favourite under irrigation, no doubt because the grain is almost all fed on the ranch. These crops appear to yield best when irrigated about the middle of June and a second time about July the 16th to 25th, unless weather conditions interfere; but, in most cases, water is not available at these times, so that some other method must be adopted. Very good success is obtained by a thorough irrigation late in the fall, with a careful working of the land early the next spring before the seed is put in, so that the moisture is conserved. Others have obtained good results by watering thoroughly in the early spring during the period of spring run-off, and then getting their machinery on the land as soon as it is sufficiently dry on top to put in the seed.

Although last season was extremely wet for this district the benefits derived from irrigation were well illustrated by the results obtained by Mr. W. B. Freel on the Frenchman river. He had put in some twenty acres of oats and had commenced watering them when a very heavy rain caused considerable damage to a large cut near the head of his ditch, making further irrigation an impossibility until too late in the season to be of any value. He had, however, thoroughly watered some six acres and at the time of inspection on August 30, the difference between this area and the rest of the crop was most marked. The irrigated grain was very heavy and stood almost six feet in height, while the rest of it was light and about four and a half feet high. Mr. Freel estimated the yield of the two parts at seventy-five and thirty bushels per acre, respectively.

Owing to the fact that the market is very limited, little has been done towards growing vegetables and small fruits, excepting in small patches for the owner's private use, although it has been demonstrated that almost any variety of these may be grown successfully under irrigation at the lower elevations. Mr. H. H. Fauquier, on Hay creek, went into this business quite extensively some years ago, and, in addition to the more common vegetables and fruits, succeeded in growing and ripening watermelons, canteloupes, corn, tomatoes, cucumbers, plums, &c. This shows what can be done by intelligent handling of the land and proves that, so far as climate and soil are concerned, practically all vegetables and small fruits can be grown if water is available and some care is exercised in cultivation. The land in this case is a sandy loam of good quality and was always carefully worked. On the south side of the hills, near the international boundary, Mr. V. W. Heydlauff has practically duplicated these results, although on a smaller scale, despite the fact that his scheme is a new one and is still unfinished. At the western end of the district, near Dunmore, Mr. Francis Wright last year took a crop valued at $3,500 gross, from an area of fifty-one acres, as mentioned in Mr. W. A. Fletcher's report, and I append hereto a detailed list showing the nature and quantity of the different crops grown by him. Where proper care and attention are given, these yields are not extraordinory. Mr. Fauquier met with equal and sometimes greater success in some crops when he was in the business, while many others scattered through the hills, working on a much smaller scale, have obtained equally good results.

From the above it can be seen that there is a very good field for truck gardening here, and, owing to the prevailing high prices for such produce in the west, such work should prove extremely profitable to the producer when he is so situated as to have easy access to a market.

METHODS OF IRRIGATION USED AND SUCCESS OBTAINED.

In practically all cases where hay is the object of irrigation the water is applied by the method of wild flooding; that is, water is turned out of the stream during high periods and by means of a few directing ditches is made to cover the land to a depth of from three to six inches, flowing slowly over it and back into a natural water-course or to the creek channel itself. Naturally, this method is extremely wasteful of water and is not by any means the most efficient way of covering the land, although it is by far the cheapest and takes the least work. Its wide adoption, no doubt, arises partially from these causes and partially from the fact that the flood periods are usually of too short duration to permit of the water being carried over the land properly by a system of laterals, checks or any other means than by dykes, unless reservoirs are provided.

A system that is an improvement on the above method, and which is being used to a greater degree lately, is that of dykes. This method is identical with the check system, excepting that the dykes are higher than those used on cultivated lands and the water is held to a depth of from one to three feet over the land under the first dyke for a short period—occasionally as long as two weeks—and is then released by means of waste-gates and allowed to flow into the next lower dyke and so on until the whole area has been covered. This method has the advantage of soaking the land more thoroughly and of acting to some extent as a reservoir system, while the waste of water is not nearly so great. The dykes are most successful when constructed on contours at intervals of from one to three feet in vertical height and should be built with long, easy slopes and rounded tops, so that they will allow easy passage of agricultural machinery over them. The systems so far installed are proving very satisfactory and very good results are being obtained from them in the growth of hay. Their value for the irrigation of grain and other crops is doubtful and, although I have never seen the experiment tried, I believe it would prove a failure unless the dykes were very low and comparatively close together.

Lateral systems, as used for hay production, are usually of a very primitive nature and in almost all cases combine with the wild flooding system to produce the desired results. Messrs. Enright and Strong's works probably show the greatest development of any large scheme and they use a system of laterals, dykes and wild flooding over their hay lands, with very good results, as they also have drainage canals cut from the lower portions of the meadows to the river. Last season they were able to cut between eighty and ninety tons of timothy and clover from some thirty-five acres of land which was watered with laterals, but their meadows of natural grass did not produce over one ton per acre. For grain they use laterals several hundred feet apart and flood the land between them, obtaining very good results. The grain was in excellent condition during the latter part of August last and all indications were for a heavy yield. For potatoes and vegetables water is applied by running small streams down the furrows between the rows, and this method has been found very successful.

In the majority of cases of those growing grain, a somewhat similar method to that used by Messrs. Enright and Strong is employed, with results varying according to the efficiency of the system and the experience of those using the water. The check and furrow systems, excepting as noted in connection with dykes, are practically unused to any large extent, probably on account of the expense involved in levelling and preparing the land. Of course, in the case of gardens where the land is bearing a valuable crop, requiring a great deal of tilling, the furrow method is used altogether, but these cases are seldom met with on any considerable scale at present.

FLOOD WATER IRRIGATION AND DUTY OF WATER.

Probably the most striking feature of irrigation throughout the Cypress Hills is the large number of schemes depending wholly upon flood water for their supply, also the success which has been attained by this class of schemes. In the case of almost all the streams in this district the water-supply a few miles below the head-waters is of this nature to a greater or less extent, so that, until reservoir systems are installed, it will be necessary for owners to make the best of what they have and to try for the best paying crops that can be successfully grown with the facilities at hand. At present ninety-five per cent or more of such land is used as hay-meadow, and it would appear that such use gives better net returns per acre than grain when the work necessary for the latter is taken into account.

When these heavy valley-lands, composed of what is known in this country as 'gumbo,' but resembling the 'adobe' of New Mexico and the South, are in their natural condition, little or no vegetation is found upon them and, by noting the condition of pools of water left on them after rains. it can be seen that the soil is extremely impervious, so much so that the greater part of the water evaporates, moisture extending into the soil only a few inches. Under irrigation, therefore, it is impossible for such land to absorb the amount of water required by the legal duty of water, and from several years' observations I very much doubt whether more than from three to six acre-inches of water are actually taken in by this land during a season's thorough irrigation. This amount may appear very small, but it should be noted that such land is always moist a few inches below the surface, so that it would appear as though it were as good at retaining moisture as it is in resisting the absorption of it. Good results are almost invariable on this class of soil where only flood-water is available and where only a fraction of the legal duty of water can be applied, but, on the other hand, there are a few cases where water is always available, and such areas have been badly damaged by the rising of alkali and the growth of foxtail grass, through no other apparent cause than the application of too much water.

There are many instances of streams along which the only irrigable land is of this heavy nature and there can be no doubt that the application of the full quantity of water called for by the legal duty of water would, in a short time, absolutely ruin the meadows and render them unfit even for pastures, unless a very elaborate system of tile underdraining were installed and the soil rendered much lighter by manuring or other means. As matters stand at present it is practically impossible for any such amount of water to be applied, as it merely runs over the ground and back into the channel with a comparatively small amount entering the soil. In the case of sandy lands or loam having a gravelly subsoil, water is absorbed quickly and carried off quickly, so that the arbitrary duty of water may be a very fair quantity in these cases, but in the heavy lands it is probable that the application of so much moisture would result in damage rather than benefit.

This brings up a point of interest in regard to some of the creek valleys, where the water-supply is all granted according to the present basis, but where there are still large acreages which could easily be irrigated if water were obtainable. These lands are of little or no value without water, while under irrigation they become highly profitable as hay-meadows. The adjoining lands under water licenses have a right to use more water than they can put to beneficial use, with the result that the return flow from their lands regains the creek channel below and is lost. The question naturally arises, why not divert this overflow water on to lands adjoining, and from them on to others, until it is exhausted. The reason is, of course, that the Department has already granted rights up to the full capacity of the stream and cannot grant further rights to something which is not there. It is possible that future investigation will prove conclusively that irrigation schemes on this class of land cannot use the quantity of water to which they are now entitled and thus render a portion of their license subject to cancellation for non-use, which would involve a readjustment of rights on the whole stream.

In conclusion, it may be said that while irrigation farming in Canada is still in the experimental stage, enough has been done to demonstrate that success is practically certain in diversified farming and that almost all field crops, vegetables and small fruits can be brought to perfection in this district. The trouble has been, and still is, that the irrigator is satisfied with a comparatively small return per acre from a large area so long as the work and expense involved are trifling, and, as a majority of irrigators are ranchers, the growth of winter feed has been the great desideratum. When the irrigated tracts become broken up into smaller holdings and really careful farming is practised, there is every reason to hope that the success of irrigation will be as great as in the older districts in the United States. Within a few years it is probable that alfalfa, clover and timothy will enter largely into the production of hay and that, as a result of crop rotation and scientific farming, the land will become richer rather than poorer from the uses to which it is put, in addition to returning larger profits to the owners.

Respectfully submitted,

RALPH J. BURLEY,
Division Engineer.

APPENDIX TO CROP REPORT OF R. J. BURLEY.

(Products from irrigated land, 51 acres—N.W. ¼ Sec. 34, Tp. 11, Rg. 5, W. 4th Meridian.)

Irrigation scheme of Francis Wright.

Product.	No. Acres.	Yield.	
Wheat	11	371	bush.
Oats	5	353	"
Peas	1½	60	"
Potatoes	18	3,000	"
Mangels	2	400	"
Carrots	½	600	"
Turnips	1	900	"
Beets	½	200	"
Onions	¼	200	"
Parsnips	¼	25	"
Tomatoes	....	40	"
Cabbages	....	10,000	heads.
Corn (green)	¼	2	tons.
Oats and Rye	10	30	"

SCHEDULE OF BENCH MARKS ESTABLISHED IN MAPLE CREEK DISTRICT DURING SEASON OF 1911.

Location.	Elevation.	Remarks.
	Feet above sea-level.	
On N.W. corner of Dixon Bros., store at Maple Creek ...	2472·800	Dom. Gov. B. M. No. 118.
At N.E. corner Tp. 11, R. 27, W. 3rd Mer.	2513·555	I. P. Tempy. Gov. B. M.
At N.E. " " R. 28, "	2520·815	" "
At N.E. " " R. 29, "	2623·173	" "
At N.E. " " R. 30, "	2393·290	" "
At N.E. " " R. 1, 4th	2410·072	Permanent "
At N.E. " Tp. 10, R. 27, 3rd	2576·981	Temporary Gov. B. M. (6 ft. N.W. of mound).
At S.E. " Tp. 11, R. 27, "	2500·197	Tempy. Gov. B.M.
At N.E. " Tp. 10, R. 28, "	2677·794	Top of Tp. post.
At S.E. " Tp. 11, R. 28, "	2718·513	I. P. Tempy. Gov. B. M. (in W. pit at mound.)
At N.E. " Tp. 10, R. 29, "	2832·612	" "
At S.E. " Tp. 11, R. 29, "	2920·327	" "
At N.E. " Tp. 10, R. 30, "	2744·677	Top of Tp. post.
At N.E. " Tp. 10, R. 1, 4th . . .	2636·556	"
At N.E. " Tp. 9, R. 1, "	3084·014	"
At N.E. " Tp. 8, R. 1, " . .	3774·666	"
At N.E. sec. 24, Tp. 8, R. 1, "	4436.789	Permanent Gov. B. M.
At N.E. " 34, Tp. 7, R. 29, 3rd . ..	4376·666	" "
At N.E. " 33, Tp. 6, R. 29, "	3663·539	Tempy. "
At N.E. corner Tp. 5, R. 29, "	3415·120	Permanent "
At N.E. " Tp. 5, R. 30, "	3472·356	Top of Tp. post.
At N.E. " Tp. 5, R. 1, 4th .. .	3580·588	Permanent Gov. B. M.
At N.E. sec. 24, Tp. 5, R. 1, "	3445·481	" "
On south bank of Maple creek at east boundary of Sec. 16, Tp. 11, R. 26, W. 3rd M.	2465·335	" "

The datum of the elevations listed above has been carried from the elevation of the Dominion Government bench mark number 118 on the northwest corner of Dixon Bros.' store at Maple Creek, which has an assumed elevation of 2,472·800. In order to get the datum of Canadian Pacific Railway levels at Maple Creek it is required to apply a correction of plus 0·945 feet. The levels were all checked by two independent circuits and in reducing were corrected for curvature and refraction. In reducing the levels the differences between the two circuits were equally divided and in reducing the elevation of any bench mark set on one circuit the correction to the elevation was made in the ratio of the distance from the last bench mark set with a reduced elevation.

No. 43.

REPORT ON THE CALGARY DISTRICT BY J. C. MILLIGAN, C.E., INSPECTING ENGINEER.

Department of the Interior, Irrigation Office.
Calgary, Alberta, March 11, 1912.

F. H. Peters, Esq.,
Commissioner of Irrigation,
Calgary, Alta.

Sir,—I have the honour to submit herewith my report of the work done by the party under my charge in the Calgary district, Alberta, on irrigation surveys, during the season of 1911.

LIMITS OF DISTRICT AND HOW TERRITORY IS COVERED.

The district mapped out for inspection by myself and party during the summer of 1911 is bounded on the north by the north boundary of township 24; on the west by the first range of the Rocky Mountains; on the south by the south boundary of township 3; and on the east by the Calgary and Edmonton railway, the Peigan Indian reserve, and the east boundary of range 29, west of the fourth meridian.

The territory was covered with the aid of a light camping outfit, and camps were located within convenient driving distance of a group of irrigation schemes, so that the largest possible number of schemes could be inspected from each camp.

GENERAL CONDITIONS OF IRRIGATION WORKS IN THE DISTRICT.

The Calgary district can be divided into two distinct parts, viz.: the general farming or prairie country, and the ranching, or foothills, country.

The general farming, or prairie, country is within a semi-humid area, where the rainfall is generally sufficient to ensure a good crop. All the irrigation works should, therefore, have been designed for intermittent work, which means the storing of water to ensure a good supply during droughts. This matter has never been taken into account, and the result has been that in droughts, when water was particularly required, none was obtainable, as out on the prairie all the streams had run dry. This has had a very discouraging effect on the farmers, who consider that water, to be of any value to them, should be available during droughts. If water were available, irrigation could then be used successfully and be, what it should be in this part of the country, an insurance against crop failure. As a result of these occasional droughts, irrigation is now considered not worth the trouble and most of the schemes on the prairie section have been allowed to go to ruin and in a great many cases licenses have been abandoned.

In the foothills, or ranching country, where irrigation is used exclusively for hay and green-feed crops, the same conditions have not existed; consequently the irrigation schemes, although not in first-class order, are used to a large extent, and some interest is taken in them. Range is now very limited in extent, and within the last year almost every rancher has been compelled to erect fences to protect his land from being overrun by his neighbours' stock; consequently he is now placed in the position of having to grow as much hay as possible on the limited area of land at his disposal.

It is in this district that irrigation is beneficial in all years, as hay crops can stand continual irrigation up to the cutting season, without fear of detriment. The ranchers are, therefore, realizing the benefits of irrigation, and in the future it will probably play an important part in farming in the foothills: works will be kept in order, and good results will be obtained.

EXTENT AND CHARACTER OF IRRIGATION DONE.

During the season of 1911, sufficient moisture fell in the Calgary district to ensure a good plant growth; very little irrigation was therefore used, and there was little or no opportunity of judging what actual irrigation does take place. The general method of irrigation adopted is flooding by means of contour ditches, which is the only suitable method for this part of the country, as the nature of the irrigated land is rolling. The only conclusion to be arrived at, from an examination of the schemes in the prairie district, is that little or no irrigation has taken place for several years. The works are generally in poor condition and in a great many instances the ditches are practically destroyed. This condition applies to the irrigation schemes having their sources of supply in small creeks with uncertain flow. Irrigation schemes, having their source of supply in the larger streams with more certain flow, are generally in better condition but, on account of the climatic conditions in 1911, very little irrigation was done.

In the foothills district a fair amount of irrigation took place. The method used was flooding by means of contour ditches in the spring and early summer. Irrigation was also used in the fall and it should be possible to collect some data of results during the coming summer. In this district irrigation was not practised in a thorough manner, with the result that hay crops were very patchy, showing that no system had been observed in the distribution of water. In the prairie district eight irrigation systems were in use, four to irrigate hay-meadows and four to irrigate general garden truck; in the foothills district twenty-four systems were in use irrigating hay-meadows.

SUGGESTIONS FOR BETTERMENT OF CONDITIONS.

In the past it has been the practice to grant licenses for irrigation schemes at high and flood stages of streams. It is suggested that this be discontinued, unless under certain circumstances, that is, along with storage reservoirs, or where only hay is to be irrigated. For a period of some thirty days between June 15 and July 15, and for a short time in the fall after the harvest has been taken off, water can be beneficially applied to land for general crops. At these times there is practically no high water or flood in any of the streams; therefore licenses which are granted on this basis are of no value without storage capacity. Of course, the licensee may use water with regard to the priority of his license, but in years when irrigation is required all the available water is used by the licensees holding rights at low-water stage. As a great many of the streams in the prairie district go completely dry during some years, it is suggested that these streams be tabulated, and that no licenses be issued unless storage capacity is also provided, or unless hay only is to be grown.

There is another remedy for this matter, but it may hardly be considered feasible at present owing to its great cost. If storage reservoirs were built at convenient points in the mountains or foothills the difficulties of a permanent water-supply would be eliminated. These reservoirs could be built at the expense of the government, and a *pro rata* sum charged to each licensee on each particular creek, the rate being so fixed that the cost of the work and its upkeep would be repaid to the government within a fixed period.

PERSONNEL AND EQUIPMENT OF PARTY.

The party consisted of one engineer in charge, with rodman, teamster, and cook, and was equipped with a light camping outfit, which included two teams and two democrats, with a saddle-horse. The instrumental equipment of the party was as follows:—

One set draughting instruments.
One dumpy level (Gurley with compass).
One mountain transit (Gurley).
One small Price electric meter.
One stop-watch.
One 12-inch weir.
One 15-inch weir.

The work consisted of inspecting irrigation schemes, both licensed and authorized; surveying and setting out new schemes; reporting on the feasibility of proposed irrigation schemes; helping licensees of irrigation schemes, both with advice and by designing new structures; gauging streams and irrigation canals; placing gauge rods in irrigation canals, and making final measurements of work done on completed schemes.

On account of a late start and my lack of familiarity with the district, I found it impossible to make a complete survey of all the schemes in the district. The tour of inspection was begun on May 28 and, in all, twenty-five camps were made. Work was carried on during the months of June, July, August, September and October, but had to be abandoned on November 11 on account of deep snow and low temperature. Work was again started in December, but for the same reason it had soon to be abandoned.

SUMMARY OF WORK.

Number of inspections made during season 1911	111
Gaugings of creeks and irrigation ditches taken	37
Final measurements of work done	2
Gauge rods placed in irrigation canals	9
Inspections of waterworks made	2
Lateral systems laid out	2
Drainage systems laid out	2
Number of surveys made	13
Miles of traverse run	19·5
Number of plans made	16
Distance travelled with team and wagon	2,254 miles.
Number of camps made	25
Number of working days on inspection work	141
Number of wet days	19½
Number of days moving camp	24

Respectfully submitted,

J. C. MILLIGAN,
Inspecting Engineer.

No. 44.

CROP REPORT, CALGARY DISTRICT, BY J. C. MILLIGAN, C.E., INSPECTING ENGINEER.

DEPARTMENT OF THE INTERIOR,
IRRIGATION OFFICE,
CALGARY, ALBERTA, March 11, 1912.

F. H. PETERS, Esq.,
Commissioner of Irrigation,
Department of the Interior,
Calgary, Alta.

SIR,—I have the honour to submit herewith my crop report for the Calgary district for the season of 1911.

This district is bounded on the north by the north boundary of Township 24; on the south by the International boundary between Canada and the United States; on the west by the 1st Range of the Rocky mountains, and on the east by the Calgary and Edmonton railway and the Blood Indian reserve.

The district consists of two sections: prairie or general farming lands, and foothills or ranching lands. It is difficult to define a boundary between these two sections, as the ranching country is only being opened up and it is claimed that some ranching land, so designated a short time ago, is in reality good farming land. This may or may not be the case, and only time can show. It is certain, however, that throughout a large part of the foothills very severe frosts take place at nights, even as early as July, sometimes severe enough to freeze water to a thickness of over half an inch.

Only a small portion of this district is devoted to general farming and this part lies adjacent to the railway line. It is comparatively low-lying and flat, and is outside the frost belt, which lies along and among the foothills. This part of the country comprises probably the best wheat land in Alberta. It is an old settled district and is well populated. Wheat is the main crop, but all crops common to the Canadian West are grown here successfully. In the Pincher Creek and Cowley districts winter wheat is the principal crop and large yields are produced.

It is claimed that winter-killing of wheat is practically unknown here, and that a good crop is assured every year. The partial crop failure in 1911, cannot be attributed to winter-killing, as patchiness was remarkable for its absence, and crops seemed to be in splendid condition at the time of inspection.

In the foothills, or ranching country, which includes all the country lying west of a line nine to twelve miles west of the Calgary and Edmonton railway, and consists of the hills and valleys adjoining the Rocky mountains, ranching is carried on. Although the range is becoming more crowded year by year, there is still a large ranching business done. The only crops grown here are for local feed, and consist of green oats, timothy hay, bromus and irrigated wild prairie hay. All these crops grow luxuriantly in this district, and with the aid of irrigation, which is used in a great number of cases, timothy occasionally yields three tons to the acre. Timothy is the main crop, and it is usually sown with a nurse crop of oats, which is cut as green feed the first year.

In a great many places in the valleys of the foothills timothy now grows wild, especially on the low-lying parts along stream beds. Bromus is only grown to a very limited extent, and a good crop is always assured. Clovers seem generally to kill out the first or second year. Alfalfa, or lucerne, is seldom grown, as very little success has been achieved with it. This probably is due to improper methods of cultivation, rather than to the climate.

A great many trials have been made to grow it, but, so far, with very little success, as winter-killing seems to be the rule during the first winter. The experience of Mr. George Lane on his Willow Creek ranch (Sec. 5, Tp. 14, Rg. 29 west of the 4th meridian) is, however, an exception to the rule, and goes to show that, if reasonable attention and care are given to its cultivation, alfalfa can be grown successfully. At present Mr. Lane has 250 acres in alfalfa, 100 acres of which has been yielding crops for a number of years. No winter-killing has been observed, and no inoculation has been used either on the land or with the seed. The method of cultivation employed was as follows: land was selected that had been cropped for some time; it was then ploughed deeply, disced thoroughly, dragged and levelled; seed was then sown one inch deep and no more, and land was corrugated twenty inches apart for irrigation. About the first of June the seed was sown, care being taken that regular seeding took place. Water was not applied before the fall, and the first year's crop was cut, leaving a long stubble. After the first year the crop was irrigated either twice or thrice, according to the amount of moisture in the soil. The usual time that water was applied was after the first cutting at the end of June, and once in August after the second cutting. If, however, the fall proved to be very dry, another irrigation was given in September. Two cuttings of the crop were made and from two and one half to three tons per acre were harvested.

Some of the farmers sowed alfalfa during the spring of 1911, and in one case, that of Mr. Quail, of Claresholm, in Sec. 36, Tp. 11, Rg. 28 west of the 4th meridian, a good crop was taken off. This crop was grown on some twenty acres of land that had been previously seeded to winter wheat, but, owing to a bad winter-killing, it was reseeded to alfalfa. Some information should be secured regarding the condition of this crop during the season of 1912.

Respectfully submitted,

J. C. MILLIGAN,
Inspecting Engineer.

No. 45.

REPORT OF SPECIAL INSPECTIONS BY P. J. JENNINGS, C.E., SPECIAL INSPECTING ENGINEER.

Department of the Interior, Irrigation Office.
Calgary, Alberta, March 4, 1912.

F. H. Peters, Esq.,
Commissioner of Irrigation,
Calgary, Alta.

Sir,—I have the honour to submit the following report upon the work done during the season of 1911, on 'Special Inspections.'

This work was taken over by me on the 17th of May, 1911. After spending some five days in the Calgary office upon the perusal of files and the collection of the necessary plans, &c., I started out on the first tour of inspection on May 21. Owing to the early freeze-up and the extreme cold weather it was not possible to continue this work, economically, after November 28, 1911.

AREA OF TERRITORY COVERED.

The inspections made during the season covered a territory extending from the International boundary on the south to a point as far north as township 67, as far as Crowsnest Pass to the west, and to the east as far as range 14, west of the 2nd meridian. The area within the scope of 'Special Inspection' work includes the provinces of Alberta and Saskatchewan, which together have a total area of some 504,190 square miles. It will be readily understood that in order to reach the many widely scattered schemes throughout this great area long train journeys and equally long drives, often through very sparsely settled country, had to be accomplished.

CLASS OF INSPECTIONS.

The inspections, which were varied in character, covered a wide field of engineering and included small pumping schemes for railway water-tanks, coal mines, etc., larger pumping schemes for municipal waterworks and irrigation. gravity systems of water-supply for both municipal and irrigation purposes, and drainage works for the reclamation of marsh lands. The pumping schemes included the use of a great variety of pumps and a still greater variety of motive power for driving them.

Inspections to determine the feasibility of proposed schemes often required very careful investigation and the acquisition of much local information, the quantity of water available being, in most cases, the most difficult point to decide in order that other interests might be protected.

The explanation and interpretation of the Irrigation Act in regard to the ownership, on private lands, of waters required for various purposes, was a matter that had to be repeatedly explained. The general ignorance of the existence of the Irrigation Act and its application was noted in many instances, more especially in Saskatchewan than in Alberta.

PROTESTS.

A good deal of time was taken up in enquiring into schemes where protests had been filed. It was, however, usually found that the basis of a protest was due to lack of knowledge regarding the limitations of the privileges sought by the applicant. In other cases it could be traced to jealousy or to old outstanding grievances which had no bearing whatever on the case.

The applications for water at high and flood stages from streams of short-lived, or small, summer flow, are usually the ones where most protests are met with. Misunderstanding usually arises from the fact that little, if any, attention has been given to the most important feature of the applicant's published notice, where the stage of the stream at which water may be diverted is set forth. When this is properly examined the protests are usually withdrawn.

Protests were met with, in some cases, from settlers living from twelve to fifteen miles below the point of the proposed diversion. These protests are usually for loss and damage through the assumed loss of a regular supply of water for domestic use due to the works above them. Where little, if any, information exists regarding the flow of small, fluctuating streams, such as exist on the prairies, many difficulties arise in the settlement of these disputes. It has, therefore, often been necessary to spend considerable time upon investigations, which would otherwise not have been necessary, in order to ensure the passage of sufficient water for the domestic needs of the settlers below during the periods in which it has been ascertained that they are entitled to it. These periods can only be defined when has been ascertained by experiment the stage of the stream at which the losses in transit, etc., between the two points in question exceed the flow. Until this information is procured it is impossible to outline a settlement equitable to both sides.

DRAINAGE.

Drainage for the reclamation of swamp and submerged lands has also had some attention in this year's (1911) inspection work. The difficulty found with this work was the lack of facilities to take soundings in order to check the correctness of the plans submitted and to determine the feasibility of the scheme. In cases where drainage work had already been undertaken, some excellent hay lands had been reclaimed. As a general rule, these schemes are very beneficial to the surrounding country and are usually welcomed by the settlers. The chief feature of this work has been the investigation of protests against the granting of the application. In some cases these protests have been well founded and the applications have been disapproved, while in others there has not been found sufficient ground for protest.

DIFFICULTIES ATTRIBUTABLE TO WIDELY SCATTERED INSPECTION.

There are many difficulties which occur on this work through the schemes being so widely scattered which add greatly to the cost of each inspection, but, at the same time, are unavoidable. In the first place it would not be economical to take a competent assistant out on this work owing to the unavoidable loss of time in getting from one place to another and the consequent high cost of transportation. The result is that wherever a survey, a line of levels or an important stream gauging is required, it is necessary to employ inexperienced helpers. This not only impedes progress until the helpers have become familiar with the work, but there are also constant worry and danger of incorrect work.

SCHEMES INSPECTED, COST, &C.

The number of schemes inspected and reported upon during the season amounted to 78; of these schemes 39 were in connection with irrigation, 23 for industrial purposes, eleven for municipal and domestic purposes, four for drainage, and one special inspection. In connection with these 78 schemes, seven amended plans were prepared, one scheme was surveyed and complete plans made for the works, and three explanatory plans were made to accompany reports. In order to carry out this work it was necessary to travel over four different railway systems, the total rail-mileage amounting to 5,340 miles. To reach the many outside inspections it was necessary to travel 1,909 miles with team and wagon.

The total expenditure on this work for the season, including my own salary, amounted to $1,827.88 for the 78 inspections made, or at the rate of $23.43 per inspection. When it is considered that for each inspection made it was necessary to travel, on an average, 93 miles, and that to the cost of this must be added other incidentals, such as board and accommodation, team and man-hire and a proportion of the time lost through bad weather, the cost does not appear excessive.

The number of days lost on account of bad weather was 14; lost in travelling, approximately, 60; Sundays, 28; making a total of 102 days. The total number of days available, including Sundays, was 192; thus 90 days were left for 78 inspections, or at the rate of 1·1 days per inspection. For the whole season this would work out at the rate of 1 inspection for 2·3 days.

On account of the large number of inspections that are already on hand for the season of 1912 it will be possible to work in a great many more inspections on each tour, and, by a careful arrangement of the inspections to be made on each tour, the average cost per inspection can undoubtedly be reduced. It is impossible to limit or define the cost per inspection, as the amount of work varies so greatly with each scheme, and it is, therefore, only possible to strike a general average cost for the season.

Respectfully submitted,

P. J. JENNINGS,
Special Inspecting Engineer.

No. 46.

REPORT OF P. M. SAUDER.

Department of the Interior, Irrigation Office,
Calgary, Alberta, May 3, 1912.

R. H. Campbell, Esq.,
Director of Forestry,
Ottawa.

Sir,—I have the honour to submit herewith a brief report from Mr. P. M. Sauder, Chief Hydrographer, upon the work of Stream Measurements which has been done during the past season, 1911-12.

Your obedient servant,

F. H. PETERS,
Commissioner of Irrigation.

REPORT OF P. M. SAUDER, C.E.

Department of the Interior, Irrigation Office,
Calgary, Alberta, March 31, 1912.

F. H. Peters, Esq.,
Commissioner of Irrigation,
Calgary, Alta.

Sir,—I have the honour to submit the following brief report on the work of Stream Measurements during the past year.

ORGANIZATION AND SCOPE OF WORK.

As the result of an increased appropriation we were able to extend the work very much during the past year. Considerable reconnaissance was done and a number of new gauging stations were established. In the spring of 1911 field operations were commenced with 98 regular stations and at present we are studying the regimen of flow at 132 regular stations along the various streams in Alberta and Saskatchewan, as well as securing records of the quantity of water diverted by 30 ditches for irrigation purposes. Most of the stations on ditches were established by, or at the request of, the irrigation inspecting engineers. Winter records, which are so valuable for power investigations, have been given considerable attention lately and records have been secured on almost all the important streams in the two provinces during the past winter.

The methods of carrying on the investigations were similar to those of previous years. Local residents were engaged to observe the gauge-height at regular gauging stations. These observations were recorded in a book supplied by the Department and at the end of each week the observer copied the week's records on a postal card which was sent to the chief hydrographer by the first convenient mail. The district hydrographers made regular visits to the gauging stations, usually once in every three weeks. They examined the observers' records, made discharge measurements and collected such information and data as would be of use in making estimates of the daily flow at the station. The results of the gaugings were transmitted by a postal card to the chief hydrographer. The records of the gauge-height observers and the hydrographers were copied from the postal cards to regular forms in the office at Calgary, and filed. At the close of the open season part of the engineers returned to the office and assisted in the final computations and estimates of run-off. Gauge-height-area, gauge-height mean-velocity, and gauge-height-discharge curves were plotted and rating tables constructed. Tables of discharge measurements, daily gauge-height and discharge, and monthly discharge were also compiled. These records are being recopied and will be embodied in the third annual report of the Progress of Stream Measurements, which will be completed in a month or six weeks.

The organization in 1911 was very similar to that of the previous years. The territory covered having been very much increased during 1911, the staff was increased to include ten assistant engineers, a recorder, a computer and a clerk The territory was divided, for administrative purposes, into ten districts, viz.: Banff, Calgary. Macleod, Cardston, Milk river, Western Cypress Hills, Eastern Cypress Hills, Wood Mountain, Moosejaw and Battleford. In each district there was an hydrographer, and while in the field he had an assistant and was equipped with the necessary gauging and surveying instruments. In the Banff, Macleod, Moosejaw and Battleford districts the hydrographer travelled by train or hired livery and stopped at hotels and stopping houses, while in the other districts they were supplied with a team, light wagon and light camping outfit.

BANFF DISTRICT.

This district includes the following regular gauging stations:—

Stream.	Location.	Date Established.
Bow river	S.E. 28-28-16-5	July 18, 1910
"	N.E. 35-25-12-5	May 25, 1909
"	N.W. 32-24- 8-5	Feb. 1, 1912
Cascade river	S.E. 19-26-11-5	Aug. 16, 1911
Devils creek	S.E. 29-26-11-5	June 18, 1910
Ghost river	N.E. 23-26- 6-5	Aug. 17, 1911
Jumpingpound creek	Sec. 30-24- 4-5	May 7, 1908
Kananaskis river	N.E. 33-24- 8-5	Aug. 31, 1911
Pipestone river	S.W. 27-28-16-5	Aug. 31, 1911
Spray river	Sec. 25-25-12-5	July 15, 1910

Bow river, with its many important tributaries, is playing a very material part in the industrial and agricultural development of Alberta. As is well known, large tracts of land lying east of Calgary and also in the vicinity of Medicine Hat are to be irrigated from it. The whole of the normal flow and a large portion of the high water have already been granted for irrigation purposes. The market for power is increasing and preparations are being made to increase the output of the existing plants and to construct new ones. During 1911 a survey under the direction of the water power branch of the Department made extensive investigations on the upper regions of Bow and Elbow rivers. With a view to a very comprehensive study of the flow of these streams, several new gauging stations were established and almost all the stations in this district have been maintained during the whole of the past winter. In a few cases the conditions have been so unfavourable that gauge-heights could not be obtained all winter, but in almost every case discharge measurements have been made regularly at intervals of about two weeks. A large number of miscellaneous measurements at other points and on other streams were also made during the year.

During the months of April and May, 1911, H. C. Ritchie, Grad. S.P.S., was in charge of the field-work in this district. On the first day of May, when Mr. Ritchie was placed in charge of the construction of the rating station, Benjamin Russell, B. Sc., was placed in charge. About the middle of July Mr. Russell was transferred to reservoir-site surveys and Hilton Brown was placed in charge. Mr. Brown left the service in September to resume his studies at the University of Toronto, and V. A. Newhall, B.A.Sc., was in charge of the work in this district from that time until the end of February, 1912, when he resigned from the staff, and H. C. Ritchie has been in charge since that date. The final computations for this district were made by H. R. Carscallen, B.A.Sc.

CALGARY DISTRICT.

This district includes the following regular gauging stations:—

Stream.	Location.	Date Established.
Berry creek	N.E. 21-23 13-4	May 30, 1911
Blood Indian creek	S.W. 10-23- 8-4	June 26, 1911
Bow river	Sec. 13-21-19-4	Aug. 20, 1909
"	N.E. 15-24- 1-5	Nov. 25, 1910
C. P. R. canal	N.E. 36-23- 1-5	May 9, 1908
Elbow river	S.E. 15-24- 1-5	May 8, 1908
Findlay and McDougall ditch	S.W. 31-18-29-4	June 17, 1911
Fish creek	S.W. 26-22- 3-5	May 13, 1907
Highwood river	N.W. 6-19-28-4	May 28, 1908
"	N.W. 17-20-28-4	Oct. 3, 1911
Little Bow ditch	S.W. 6-19-28-4	Aug. 1, 1910
Nose creek	N.W. 13-24- 1-5	April 24, 1911
Pekisko creek	N.W. 8-17- 2-5	Oct. 6, 1911
Sheep river	N.W. 22-20-29-4	May 25, 1908
N. B. Sheep river	S.W. 12-21- 3-5	May 22, 1908
S. B. "	S.E. 17-20- 2-5	May 23, 1908
Stimson creek	N.E. 14-17- 2-5	Oct. 6, 1911

It will be noted that, while the western portion of the old Calgary district has been formed into a separate district, a number of new gauging stations have been established and the territory extended so that this is still a large and important district. Some attention was given to a study of the flow in the tributaries of Red Deer river, but, owing to the distance and difficulty of reaching these, the investigations were not as extensive as desired. The data obtained are, however, of considerable value, as previously there were practically no data at all. Regular gauging stations were established on Berry and Blood Indian creeks. The gauging station on Highwood river at High River is not very satisfactory and a new station has been established near Alderside. If the observer at the new station proves satisfactory, the old station will be abandoned. Stations have also been established on Pekisko and Stimson creeks, tributaries of Highwood river. The station on Bow river near Bassano was established and is maintained by the irrigation department of the Canadian Pacific Railway Company. Mr. A. S. Dawson, Chief Engineer, has very kindly given us copies of the gauge-height records and the results of their gauging. Our hydrographer also makes regular measurements at this station.

H. C. Ritchie was at first in charge of this district also, but, when he was placed in charge of the construction of the rating station, L. R. Brereton was placed in charge of the field-work in this district. After Mr. Brereton left the service in October to resume his studies at the University of Toronto, gaugings were discontinued at all the gauging stations in this district except those on the Bow and Elbow rivers. These were included in the Macleod district and were looked after during the winter months by N. M. Sutherland. The final computations for this district were made by H. R. Carscallen.

MACLEOD DISTRICT.

This district includes the following regular gauging stations:—

Stream.	Location.	Date Established.
Belly river	N.W. 1-19-22-4	Aug. 31, 1911
Canyon river	N.E.14- 6- 2-5	July 6, 1910
Connely creek	S.E. 36-7 - 2-5	July 31, 1909
Cow creek	N.E.14-8 - 2-5	May 26, 1910
Crowsnest river	N.E.26-7 - 2-5	Sept. 7, 1907
"	N.E.36-7 - 4-5	July 28, 1910
"	S.W.12-8 - 5-5	July 28, 1910
Mill creek	S.W.18-6 - 1-5	July 7, 1910
Mosquito creek	N.E.30-16-28-4	Aug. 1, 1908
Muddypound creek	Sec. 27-11-28-4	July 27, 1908
Nanton creek	Sec. 20 16-28-4	Aug. 3, 1908
Oldman creek	N.E.34-7 - 1-5	Sept. 15, 1908
"	N.W. 10-9-26-4	July 12, 1910
Pincher creek	N.E.22-6 -30 4	Aug. 13, 1906
Southfork river	S.E. 2- 7- 1-5	Aug. 5, 1909
St. Mary river	N.E.26- 7-22-4	Oct. 13, 1911
Todd creek	S.W.19- 8- 1-5	Aug 3, 1909
Trout creek	Sec. 33-11-28-4	July 7, 1911
Willow creek	S.W. 25- 9-26-4	July 1, 1909

This district was well organized soon after the survey was commenced and few changes were made and few new stations established during the past year. The new stations on Belly and St. Mary rivers will furnish valuable data. The importance of St. Mary river as a source of water-supply for irrigation purposes and its possibilities as a source of power are well known and the records at the new station will serve to make the data more complete. The discharge of Belly river near Lethbridge is the drainage of practically the whole of the southwestern portion of the province of Alberta and records at this point will be very valuable for general statistical purposes and, in connection with short series of measurements, will serve as the basis for estimating the flow at other points in the drainage basin. The conditions at the old station on Oldman river near Macleod have very much improved and last year this station was re-established. For some time we were unable to secure an observer at any suitable site on Trout creek above the intakes of the ditches but last year one was secured and a new station was established and the old one abandoned.

Gauge-height observations and discharge measurements have been taken throughout the past winter at all the regular gauging stations on the larger and more important streams. A large number of miscellaneous discharge measurements, which will be very valuable as general information, were also made during the year.

Owing to the coal miners' strike, industrial development in the Crowsnest district was slightly retarded during 1911. The water-supply is, however, becoming more important, and, while there is no necessity for establishing any additional gauging stations, there should be no interruption in the records at those already established. A. W. P. Lowrie, Grad. S.P.S., was in charge of the field-work in this district until the end of September, when he returned to the University of Toronto to resume his studies. N. M. Sutherland, Grad. of the Royal Military College, has been in charge since Mr. Lowrie left. The final computations for this district were made by H. J. Duffield, C.E., and G. H. Whyte.

CARDSTON DISTRICT.

This district includes the following regular gauging stations:—

Stream.	Location.	Date Established.
A. R. & I. canal	S.W.21- 2-24-4	July 26, 1910
Belly river	S.E. 21- 6-25-4	May 27, 1909
"	N.E. 5- 2-28-4	Nov. 1, 1911
Christanson ditch	S.E. 12- 3-28-4	Sept. 14, 1911
Crooked creek	S E. 23- 2-29-4	Sept. 15, 1909
Fidler ditch	S.E. 19- 1-26-4	Sept. 13, 1911
Lee creek	N.W.10- 3-25-4	June 28, 1909
Mami creek	N.E.18- 2-27-4	Aug. 13, 1909
N. B. Milk river	N.E.13- 1-23-4	July 21, 1909
"	Sec. 18- 2-20-4	July 17, 1909
Ralph creek	S.W.21- 2-24-4	May 17, 1911
St. Mary river	Sec. 25- 1-25-4	By A.R. & I. Co., 1905.
Waterton river	N.E. 8- 2-29-4	Aug. 26, 1908

While a station has been maintained on Belly river near Stand Off for some time, the importance of this stream as a possible supplementary supply for the A. R. & I. Canal justified the establishment of another station in the vicinity of Mountain View. A cable station was therefore established on the N.E. quarter of Sec. 5, Tp. 2, Rg. 28, west of the 4th meridian, at West's ranch, last fall and has been included in this district.

It was impossible to secure an observer for the gauge on the North Branch of Milk river in Sec. 18, Tp. 2, Rg. 20, west of the 4th meridian, during 1911, but discharge measurements were made at every opportunity.

For several years past the Water Resources Branch of the U. S. Geological Survey, has maintained a gauging station on St. Mary river near the International Boundary. Our gauging station at Kimball is only a few miles below and it is thought that a joint station should be maintained. A self-recording water-gauge could be installed, and, by making comparisons of the results of the gauging made by the hydrographers of both countries, records of a high degree of accuracy and results which would be most satisfactory to both countries could be obtained. It is hoped that satisfactory arrangements can be made and a joint station established in the near future.

There are several streams of some importance emptying into the Waterton lakes, but, as no observers are available, regular gauging stations have not been established on these. Miscellaneous discharge measurements of these and several other streams in the district were made whenever possible during the past year.

Winter records were taken at the stations on Belly river, Lee creek, St. Mary river and Waterton river.

L. J. Gleeson, B.Sc., was in charge of the field-work in this district until the end of November, when he returned to the office to make the final computations, and D. D. Macleod, B.A.Sc., was in charge of the field-work during the winter months.

There are only a few irrigation ditches in this district and the hydrographer therefore makes the necessary inspections. Unless urgent, these are usually made in the late summer or early fall when the streams are low and almost stationary and need not be gauged as often as usual.

MILK RIVER DISTRICT.

This district includes the following regular gauging stations:—

Stream.	Location.	Date Established.
Deer creek	S.W. 15-1-12-4	May 26, 1911
"	N.E. 26-1-12-4	May 27, 1911
Manyberries creek	S.E. 3-5-6-4	June 17, 1910
Milk river	N.E. 21-2-16-4	May 18, 1909
"	S.W. 35-1-13-4	Aug. 2, 1909
"	S.W. 21-2-8-4	Aug. 5, 1909
"	S.E. 3-1-5-4	Aug. 7, 1909
N.B. river	S.W. 19-2-18-4	July 15, 1909
S.B. "	N.W. 31-1-18-4	July 14, 1909

It was impossible to secure an observer for the gauge on the North Branch of Milk river on the southwest quarter of Sec. 19, Tp. 2, Rg. 18, west of the 4th meridian, during 1911, but discharge measurements were made at every opportunity.

As has been pointed out in former reports, the bed of Milk river is composed almost entirely of sand and loose material, which shifts continually. Discharge measurements had, therefore, to be made at short intervals, and even then considerable difficulty was experienced in compiling reliable estimates of the daily discharge.

As there have been several applications for water for irrigation purposes in the vicinity of Pakowki lake, special attention was given to the records on Manyberries creek. Not only will these be useful in studying the water-supply in this stream, but, by comparing the areas of the watersheds, a fair estimate can be made of the probable run-off in other streams in the Pakowki lake drainage.

It will be noted that two gauging stations have been established on Deer creek. This is only a small stream, but a dispute has arisen between two licensees and data are required at the two points to determine the seepage. As these stations are close to the regular route of the hydrographer, little time is lost in making the gauging and the results are of some interest.

A large number of miscellaneous discharge measurements of the small streams draining into Milk river were made during the year.

In this district, also, the hydrographer makes inspections of, and reports on, irrigation works.

N. M. Sutherland was in charge of the field-work in this district during the month of April, but for the remainder of the open season J. E. Degnan was in charge. Winter measurements were made during the past winter at the regular station on the northeast quarter of Sec. 21, Tp. 2, Rg. 16, west of the 4th meridian, by D. D. Macleod. The final computations for this district were made by J. E. Degnan.

WESTERN CYPRESS HILLS DISTRICT.

This district includes the following regular gauging stations:—

Stream.	Location.	Date Established.
Anderson ditch	S.W. 23-6-3-4	Sept. 23, 1911
Battle creek	S.W. 2-6-28-3	July 5, 1910
"	N.E. 33-5-29-3	June 3, 1909
"	N.E. 3-3-27-3	May 10, 1910
Bullshead creek	N.W. 15-9-5-4	Oct. 9, 1911
Cheeseman ditch	S.W. 12-8-29-3	June 24, 1911
Gaff ditch	Sec. 25-5-29-3	July 11, 1911
Gap creek	N.E. 31-11-26-3	May 3, 1910
"	S.W. 3-10-27-3	April 25, 1909
Gilchrist Bros. ditch	S.W. 11-5-27-3	Oct. 16, 1911
Grosventre creek	S.E. 27-9-4-4	Oct. 10, 1911
Lindner ditch	Sec. 10-6-29-3	July 26, 1910
Lodge creek	Sec. 12-1-29-3	Aug. 13, 1909
"	S.W. 15-6-3-4	July 22, 1909
E.B. creek	S.E. 1-7-3-4	Oct. 7, 1911
E.B. Mackay creek	N.W. 36-10-1-4	Oct. 13, 1911
W.B. "	S W. 23-10-2-4	Oct. 12, 1911
McShane creek	Sec. 4-10-27-3	April 23, 1909
McKinnon ditch	N.W. 20-4-26-3	Oct. 20, 1911
Maple creek	N.E. 16-11-26-3	May 9, 1908
"	S.E. 28-11-26-3	May 4, 1910
Marshall ditch	N.E. 33-5-29-3	July 11, 1911
Marshall and Gaff ditch	S.W. 25-5-29-3	July 11, 1911
Middle creek	S.W. 35-5-1-4	June 21, 1910
"	S.W. 30-5-29-3	July 20, 1909
"	N.E. 4-2-29-3	June 13, 1910
Oxarart creek	N.E. 20-6-27-3	June 15, 1909
Richardson ditch	S.E. 2-5-27-3	Oct. 14, 1911
Ross creek	N.W. 24-9-3-4	Oct. 11, 1911
Sage creek	Sec. 9-1-2-4	Aug. 10, 1909
Sixmile coulee	N.W. 36-6-29-3	July 4, 1911
"	N W. 29-7-28-3	July 22, 1909
Spangler ditch	Sec. 6-7-28-3	July 10, 1911
Starks and Burton ditch	S.E. 17-11-5-4	Oct. 9, 1911
Stirling and Nash ditch	Sec. 22 3-27-3	July 11, 1911
Tenmile creek	S.W. 4-6-29-3	July 21, 1909
White ditch	S.W. 1-9-27-3	June 15, 1911

The majority of applications for water for irrigation purposes during the past few years have come from the Cypress Hills, and, as apparently almost the total flow of many of the streams has already been granted, the records in this district are very important. It is impossible to obtain records on every stream in the district, but stations have been established and are maintained on all the more important streams and, by a careful comparison of watersheds, fair estimates of the probable flow can now be made for many of the smaller and less important streams for the same year. There are, however, very big differences in the run-off for different years, and it will be some years before the records will show the extremes of flow and a reliable mean.

During the past year, M. H. French, who was in charge of the field-work in this district, made a reconnaissance of the country surrounding Old Fort Walsh and the heads of Battle, Lodge, Mackay, Ross and Bullshead creeks and established several new stations. W. A. Fletcher, irrigation inspector, established the gauging stations on most of the irrigation ditches in this district, but, as some of the ditches were not used during 1911 and in other cases the gauge was not installed until after the irrigation season, few records of the flow in the ditches have been secured.

A heavy rain and snow storm in September caused an unexpected flood in many of the streams in this district and the run-off during the fall was higher than the average.

A large number of miscellaneous gaugings, which will be valuable as general information, were made in this district during 1911. No winter records were taken.

M. H. French was in charge of the field-work and also made the final computations. He left early in March of this year for the field so as to be on hand to gauge the first spring freshets.

EASTERN CYPRESS HILLS DISTRICT.

This district includes the following regular gauging stations:—

Stream.	Location.	Date Established.
Axton ditch	N. E. 23-7-21-3	Aug. 12, 1911
Bear creek	S.E. 18-11-23-3	June 22, 1908
E. B. Bear creek	S.E. 21-10-23-3	Aug. 18, 1909
W. B. "	S.W.32-10-23-3	Sept. 16, 1909
Belanger creek	S.W. 18-7-25-3	June 12, 1909
Beveridge ditch, west branch	N.W.18-10-24-3	June 5, 1911
" east branch	N.E. 7-10-24-3	June 9, 1911
Blacktail creek	S.W. 31-6-23-3	Aug. 3, 1909
Bone creek	N.W 34-8-22-3	July 2, 1908
Braniff ditch	S.E. 30-11-23-3	July 22, 1911
Bridge creek	N.W. 11-11-22-3	July 29, 1909
"	S.E. 33-10-22-3	April 29, 1911
Cross ditch	N.W. 15-7-22-3	Sept. 9, 1911
Davis creek	N.E. 29-6-25-3	May 24, 1909
Enright and Strong ditch	N.E. 25-6-22-3	July 31, 1908
Fairwell creek	N.W. 30-6-24-3	June 10, 1909
Fearon and Moorehead ditch	N.E. 29-10-22-3	July 6, 1911
" "	N.E. 33-10-22-3	July 4, 1911
" "	S.E. 33-10-22-3	July 6, 1911
N. B. Frenchman river	N.E. 16-7-22-3	July 25, 1908
Frenchman river	N.E. 31-6-21-3	July 31, 1908
Hay creek	N.E. 30-10-25-3	April 22, 1909
"	S.W. 29-10-25-3	July 4, 1910
Jones coulee	N.E. 5-8-10-3	Sept. 23, 1909
Lonepine creek	N.W. 27-7-26-3	July 17, 1909
Moorehead ditch	N.W. 25-10-25-3	June 10, 1911
Morrison ditch	S.W. 26-6-21-3	Aug. 22, 1911
Needham ditch	S.W. 30-11-23-3	June 22, 1911
Piapot creek	N.E. 18-11-24-3	June 17, 1908
Pollock ditch	N.W. 22-7-21-3	Aug. 10, 1911
Rose creek	Sec. 26-7-22-3	May 2, 1911
Skull creek	N.W. 10-11-22-3	June 29, 1908
"	N.E. 29-10-22-3	April 8, 1911
Sucker creek	N.W. 24-6-26-3	May 26, 1909
Swift current	S.W. 22-7-21-3	May 18, 1909
"	Sec. 17-10-19-3	May 27, 1910
"	Sec. 18-10-19-3	June 15, 1910

The remarks regarding the conditions in the Western Cypress Hills district apply also to this district. The greatest irrigation development has been in the Frenchman river drainage basin, and special efforts are being made to get gaugings in this locality during high-water and flood stages of the streams. This, however, is a large district with many long drives, and it is impossible always to be on hand at a particular station when the stream is high. There has also been difficulty in securing good observers. The records have, however, improved considerably during the past year.

Several gauges were installed on irrigation ditches by F. T. Fletcher, irrigation inspector, but, as some of the ditches in this district were not used during 1911, and most of the gauges were not installed until after the irrigation season, few records of the flow have been secured.

As a large amount of water is diverted from Frenchman river above the old gauging station, the records have not been altogether satisfactory. It was, therefore, decided to establish two cable stations at points above East End. The cables were stretched late last fall, but, owing to bad weather, the hydrographer was unable to finish these stations. They will be completed and put in good shape this spring, and it is expected that better and more satisfactory records will be obtained. The records on Bridge and Skull creeks have been much improved by the additional data secured at the new stations above the intakes of Fearon and Moorehead's ditches. A gauge was placed on Mule creek, but, as a satisfactory observer could not be secured, no records except periodic discharge measurements were secured.

The storm in September also raised the streams in this district but not as much as in the Western Cypress Hills district.

A large number of miscellaneous gaugings which will be valuable as general information were made in this district during 1911. No winter records were taken.

G. H. Whyte was in charge of the field-work and also made the final computations in this district. It was planned that he should leave in March of this year for the field, so as to be on hand to gauge the first spring freshets, but the 1912-13 appropriation not being available, he cannot leave until after the first of April.

WOOD MOUNTAIN DISTRICT.

There is only one regular gauging station in this district, namely:—

Stream.	Location.	Date Established.
Frenchman river	Sec. 5-5-14-3	May 23, 1910

During 1911, a study was made of the water-supply and possibilities of irrigation development in a large and partially settled district in the southern part of Saskatchewan, including the drainage basins of Lake Chaplin, Lake Johnston, Big Muddy lake, Poplar creek, Rocky creek and the lower part of Frenchman river. Early in June, N. M. Sutherland and myself left Swift Current and made a circuit of the western portion of this district. I returned to Calgary at the end of June and the investigations were continued by Mr. Sutherland.

An account of the work done in this district is given in a separate report by Mr. Sutherland. For this work Mr. Sutherland was provided with a light camping outfit, one man and three horses. He travelled about 1,660 miles and reported 109 gaugings. While many of the reports showed that the streams were dry, nearly dry, or had water standing in pools, it should be remembered that a trip had to be made to the stream to learn the condition. Reports on streams even when dry are just as important as when they are running as they show the actual conditions of the stream at that time.

As a result of the investigations during 1911, it has been decided that the possibilities of irrigation in this district are so limited that there will be no necessity to carry on any further reconnaissance on stream-measurement work for the present.

As suggested by Mr. Sutherland, in a few years time the farmers in this locality may wish to use the water from springs for irrigation purposes, and, when such occasions arise, no doubt investigations will have to be made of the schemes.

The records of flow for the regular station on Frenchman river were not very satisfactory. At first we could not secure an observer, and then beavers built a dam below the gauge and caused the water to back up on it. As these difficulties still exist, and there will be no hydrographer in the district during 1912, it has been decided to abandon this station.

MOOSEJAW DISTRICT.

This district includes the following regular gauging stations:—

Stream.	Location.	Date Established.
Boxelder creek	N.E. 2-12-30-3	May 24, 1909
Bridge creek	S.E. 23-13-19-3	Mar. 29, 1911
Bullshead creek	Sec. 16-12- 5-4	July 26, 1909
Long creek	S.E. 10- 2- 8-2	June 22, 1911
Mackay creek	N.W. 26-11- 1-4	July 29, 1909
Moosejaw creek	N.W. 14-15-25-2	April 13, 1910
"	N.W. 16-16-26-2	April 7, 1910
"	N.W. 19-11-18-2	June 21, 1911
Qu'Appelle river	S.W. 33-19-21-2	May 12, 1911
Ross creek	N.W. 31-11- 2-4	July 28, 1909
S. Saskatchewan river	N.W. 31-12- 5-4	May 31, 1911
Seven Persons river	N.E. 30-12- 5-4	April 27, 1910
Souris river	N.E. 11- 2- 8-2	June 23, 1911
"	N.E. 36- 2- 1-2	June 26, 1911
"	Sec. 6- 4-26-1	July 20, 1911
Swift Current creek	S.W. 30-15-13-3	April 30, 1910

It is imperative that records should be continued on Moos jaw creek for several years, and, as there are a number of important streams crossing, and in the vicinity of, the railway between Medicine Hat and Broadview, and between Moosejaw and Melita, it was decided to have an hydrographer look after these by train.

Some time was spent in reconnaissance to find the most suitable sites before the new stations were established. Besides those shown above, stations were established on Qu'Appelle river at points north of the towns of Qu'Appelle and Indian Head, but the current was so sluggish at these two points that the records were not satisfactory and the stations have been abandoned.

J. C. Keith, B.A.Sc., was in charge of the field-work in this district. After the stations had been established he did not retain a regular helper but engaged locally any help he required. Mr. Keith made a number of miscellaneous gaugings and inspected several works to divert water for domestic and industrial purposes.

Winter records were taken at the stations on Moosejaw creek near Moosejaw and Qu'Appelle river at Lumsden during the past winter. They were included in the Batttleford district during that period.

Final computations for this district were made by M. H. French and G. H. Whyte.

BATTLEFORD DISTRICT.

This district includes the following regular gauging stations:—

Stream.	Location.	Date Established.
Battle river	S.E. 19-43-16-3	June 17, 1911
Red Deer river	S.E. 20-38-27-4	Dec. 2, 1911
N. Saskatchewan river	N.W 33-52-24-4	May 14, 1911
"	N.E. 29-43-16-3	May 18, 1911
"	River lot No. 76	Oct. 2, 1911
S. "	S.W. 28-36-5-3	May 27, 1911

While the North and South Saskatchewan rivers are not likely to be of importance for irrigation purposes, they are large streams and may be utilized for power and irrigation purposes. The watersheds are large and records on these streams will also be of considerable value for general statistical purposes.

Investigations in this district were commenced in March, 1911, when miscellaneous gaugings were made on the North Saskatchewan river at Edmonton and Battleford by W. H. Greene.

In May, H. R. Carscallen was placed in charge of this district and at once established gauging stations at Edmonton, Battleford and Saskatoon. Later, a station was established at Prince Albert, by J. C. Keith.

In 1910, Mr. Keith reconnoitred Red Deer river in the vicinity of Red Deer and found that the most suitable site for a regular gauging station was at a traffic bridge west of Innisfail. Arrangements were made for an observer, but he failed to perform the duty. Gaugings were made at regular intervals at this station during 1911, but no gauge-height observations were secured. In November a further reconnaissance was made, and as the cross-section has improved, and conditions are now fairly good, a station was established at the traffic bridge in the town of Red Deer.

Mr. Carscallen had charge of the field-work in this district until the end of July, when he received leave of absence. After that Mr. Keith included this district in his route. Gaugings were continued during the winter at all the stations except the one on Battle river. Mr. Keith resigned on February 29, and H. J. Duffield was then placed in charge of the field-work in this district. Different members of the staff have done parts of the final computations for this district, but they are only partly finished. They will be finished as soon as possible.

On account of the distance between the stations the travelling and living expenses of the hydrographer are somewhat higher than in the other districts. For several months the hydrographer worked without a regular helper and hired locally what help he required, but, as the rivers in this district are very large, much skill is required in making accurate measurements, particularly the soundings, and so much time was lost with an inexperienced helper that it was decided that the hydrographer should have a regular helper.

RATING METERS.

H. C Ritchie acted as resident engineer on the construction of the rating station, the design and construction of which was carried out under your personal direction, and is, I understand, taken up in your report.

On the completion of the rating station Mr. Ritchie was transferred to the National Parks Branch and V. A. Newhall was detailed to rate the meters.

All the meters of the survey, except four which were not used during 1911 and one which was badly damaged, were rated and tables were carefully compiled for each. Three meters belonging to the British Columbia Railway Belt Hydrographic Survey and one belonging to the irrigation department of the Canadian Pacific railway were also rated. A number of meters were re-rated just before freeze-up last fall and all the hydrographers are provided this spring with newly rated meters. The spare meters will be rated as soon as possible, and, whenever an hydrographer has reason to believe that the rating of his meter has changed, a newly rated meter will be sent out to him and he will return the old meter. Meters will be rated periodically to test them. It is proposed this year to keep an hydrographer at headquarters to rate meters, look after the taking of gravel from Bow and Elbow rivers within the limits of the city of Calgary, and do any special hydrographic work that may arise.

BENCH-MARKS.

In previous years, when establishing regular gauging stations, the gauge was usually referred to a bench-mark on a wooden stake or stump of a tree. These were easily shifted or destroyed and were not satisfactory. During 1911, permanent iron bench-marks were established at sixty-two regular gauging stations. Except where the gauge can be referred to a bench-mark on a concrete pier or other permanent structure, all the new gauges, and as soon as possible all the old gauges, will be referred to permanent iron bench-marks. An assumed elevation has been given to each bench-mark but it is expected that the actual elevation above mean sea-level will eventually be determined.

OFFICE WORK.

As above intimated, the reports of the gauge height observers and the hydrographers are transmitted to the office by postal cards. These are copied on office forms and filed in a cabinet which is carefully indexed and where they can be referred to at any time without trouble. As the engineers completed their computations, the results were entered on convenient forms and filed in the same cabinet.

A cabinet made up of four styles of drawers is used for filing the records. The top section is used for filing the gauge-height books of the observers and the current-meter note-books of the hydrographers. The gauge-height books are filed alphabetically according to the names of the gauging stations, while the current-meter note-books are filed alphabetically according to the names of the hydrographers. The next section contains the postal cards sent in by the observers and the hydrographers. Both of these are filed alphabetically according to the names of the gauging stations. The third section is made up of map drawers and contains the gauge-height-area, gauge-height-mean-velocity and gauge-height-discharge curves, and plotted cross-sections, which are filed alphabetically according to the names of the gauging stations. The same section contains the maps showing the outline of the drainage basins filed numerically according to the number of the sectional sheet. The rating curves for the current meters are also filed in this section numerically according to the office numbers of the meters. The bottom section of the cabinet consists of letter-size pockets alphabetically arranged for each gauging station. The tables of gauge-heights, discharge measurements, daily gauge-height and discharge, monthly discharge, and a description of the station and memos of any changes are filed in these pockets. The different rating tables for each meter are also filed numerically in this section and another drawer contains the monthly reports of the meteorological service.

The copying and filing of the reports of the gauge height observers and the hydrographers is entrusted to the office recorder. While doing this he must carefully examine all records to see that there are no errors or mistakes, and where there are doubtful or impossible records it is his duty to have the data corrected or ascertain the cause of the unusual condition. He also makes out the pay list for the observers and conducts the correspondence relating to the records.

We did not have a regular recorder until about the end of July when R. H. Goodchild was engaged. He is to be placed on irrigation inspections and G. H. Nettleton will be placed in charge of the records.

All computations made by the survey are checked before being used or published. For this reason, as far as possible, men with with some technical education or students in science are engaged as helpers. The gaugings are computed by the helper and his work is checked by the hydrographer. In some instances, where there is a great deal of driving and camping out, the hydrographer cannot secure a helper who can compute discharges, and in that case he computes the discharges himself and his computations are checked in the office. Gaugings of the flow under ice are usually made by using the multiple point method and vertical velocity curves have to be plotted to determine the mean velocity in the vertical. The computation by this method is long and tedious and cannot be done by the hydrographer in the field. There are, therefore, a great many computations to be made in the office and the services of a computer have been required. As a result of not having one, a large amount of checking and computing had to be done by the hydrographers after they returned to the office, and for that reason the computation of daily discharge for 1911 had not been all completed when spring arrived and the hydrographers had to leave for the field. Those that are unfinished are mostly for the months of November and December, when ice conditions prevailed, and considerable time has to be spent in computing the discharge. During the winter months R. J. Srigley, one of the helpers, was utilized as a computer. He is, however, going out in the field again as a helper and a computer is urgently required.

FUTURE WORK.

Investigations will be continued during the coming year in all the old districts except Wood Mountain, and every effort will be made to extend the territory covered by the survey, but the scope of the work is of course limited by the appropriation and staff available.

There are a number of important streams which rise in the mountains west of the Calgary and Edmonton branch of the Canadian Pacific Railway. With the advent of railways, industries will soon be started in this district and the water-supply will be an important factor. A small party, such as operated in Wood Mountain district during 1911, should, I think, be placed in this district in the near future.

An effort will be made during the coming year to collect data regarding the flow in the streams along the Grand Trunk Pacific railway west of Edmonton. As soon as funds and staff are available, I think the survey should be extended to include the Athabaska river drainage basin.

I do not think it necessary to elaborate on the importance of continuing observations during the winter on the more important streams. The minimum flow occurs during that season and should be determined for use in considering power schemes. While it was realized that the streams got very low during the winter, the results of the investigations in many cases show much lower discharge than was expected. An instance of the value of winter records may be cited in the case of the Elbow river. Estimates of the possible power development, based on records of the flow during the open season, were found to be far too high when records of the winter flow were taken.

I would also repeat my suggestion of last year that the survey should be extended eastward to include the streams in the province of Manitoba. As the market for power is increasing, the time is approaching when every site will be developed. Reliable estimates of the possible power development cannot be made without a knowledge of the water-supply, and, as records should extend over a period of several years to show the extremes of flow and a reliable mean, it is important that the studies be commenced at the earliest possible date.

The water-supply is one of the most important resources of a country, and an accurate knowledge of the flow of water in nearly all important streams is essential for the solution of many problems in connection with navigation, water-power, irrigation, domestic and industrial water supplies, sewage disposal, mining, bridge-building, river-channel protection, flood prevention, and storage for conservation of flood-waters. The records of the survey are being used quite extensively now by engineers and I think the time is near at hand when the field operations should be extended to include other parts, if not the whole, of the Dominion.

Respectfully submitted,

P. M. SAUDER,

Chief Hydrographer.

No. 47.

REPORT OF N. M. SUTHERLAND, DISTRICT HYDROGRAPHER.

Department of the Interior, Irrigation Office,
Calgary, Alberta, October 5, 1911.

F. H. Peters, Esq.,
Commissioner of Irrigation,
Calgary, Alta.

Sir,—I have the honour to submit the following report on the work done in the Wood Mountain district, during the summer of 1911.

In accordance with your instructions, dated May 23, 1911, I proceeeded to Maple Creek, Saskatchewan, where I received my camp outfit, including horses, &c., from Mr. R. J. Burley.

On June 6 we left Maple Creek and proceeded along the Canadian Pacific railway to Swift Current, arriving there on June 10. At Swift Current we met Mr. P. M. Sauder and, accompanied by him, we left Swift Current on June 11.

We at first travelled south from Swift Current and inspected Pierce, Notukeu and Bull creeks. There are small flats along these creeks which are suitable for irrigation and during dry years require irrigation to grow a crop. The water-supply, in this district, however, is very limited. When the snow is melting, or during periods of heavy and continuous rain, there are small floods, but in a dry year, as nearly as can be learned from the older settlers, the flow in these streams gradually diminishes and stops altogether early in the summer. We did not establish any regular stations or gauge-rods at any of these creeks, as at Pierce creek the only available place to gauge it was some three miles from Mr. Pierce's house and at Notukeu and Bull creeks the land is homesteaded and there is no one with permanent residence, and therefore no gauge-rod readers were available.

From Bull creek we proceeded to Huff's ranch on the Frenchman river and re-established the gauge on the northwest quarter of Sec. 5, Tp. 5, Rg. 14, west of the 3rd meridian. From Huff's ranch we followed the north shore of the Frenchman river to Seventy-Mile crossing in Sec. 32, Tp. 3, Rg. 13, west of the 3rd meridian, where we crossed the river, and, after following the south shore for a couple of miles, pulled west out on the benchland and did not touch the river again until we crossed it in Sec. 4, Tp. 1, Rg. 10, west of the 3rd meridian, near the international boundary. Along the Frenchman river there are large flats, which are quite suitable for irrigation, but there is little opportunity of storing water. Most of the level land has been filed on by homesteaders.

Following the international boundary towards the east, we crossed a very rolling prairie which is quite suitable for ranching and grazing purposes. There are a number of streams flowing south and southeast, which had water in pools. From what we could learn from the older settlers, these streams remain in this condition almost every summer but do not have any flow except during the spring freshets.

The streams were all of this nature until we reached Rocky creek in Tp. 1, Rg. 6, west of the 3rd meridian. This creek had a flow of over three second-feet, and is fed by some very strong springs and drains several townships. It has a constant flow and would probably irrigate several hundred acres. Near the international boundary this stream traverses a large flat of several hundred acres which could be irrigated. After following upstream for a few miles we found that Rocky creek passed through bad lands which were impassable with a wagon. We therefore left the creek and turned northeastward, and, after crossing a very hilly district quite suitable for ranching and grazing purposes, we crossed Rocky creek in Sec. 18, Tp. 2, Rg. 4, west of the 3rd meridian. In this locality the creek flows through a narrow valley, with little opportunity to irrigate. Rainy weather had made travelling very difficult, and, as our supply of oats and food was almost exhausted, we decided to go to Wood mountain for supplies. On reaching there we found that there was no store and we could not get either groceries or oats. It was, therefore, decided to leave the boundary line and inspect Wood river.

One branch of Wood river rises near Wood Mountain post office. This had almost ceased flowing, but a rain storm started a very small flow while we were there. There was a small flow into Twelve-Mile lake, but no overflow. Following this branch of Wood river, which had a little water in pools, we reached the main stream on Sec. 6, Tp. 8, Rg. 5, west of the 3rd meridian, near Capital post office and inspected it at several points between Capital and Lake Johnston. There is only a very small flow in this stream, and, as it has a very small fall, there is scarcely any current at all. It was impossible to find a place where a meter could be used near Capital. We made a slope measurement, but owing to the dense growth of grass in the channel the results were very unsatisfactory. We made a gauging on Sec. 31, Tp. 10, Rg. 4, west of the 3rd meridian, near Gravelbourg, and found the discharge to be about 6·5 second-feet, but it was impossible to gauge the river near Lake Johnston.

Wood river has a very small fall and is more of the nature of a long slough than of a running stream. The channel is from twenty to fifty feet wide, and is from two to five feet deep. The bottom is composed of soft clay and is covered with weeds and grass. There is so little fall that it would be impossible to take out water by gravity and a dam would flood a large area of good agricultural land. The drainage basin includes a very good agricultural district, but there is little possibility of irrigation development. Notukeu creek had a small flow near its mouth but Pinto and Wiwa creeks were practically dry at their mouths. There was no flow at all from Lake Chaplin to Lake Johnston and there has not been for several years.

Mr. Sauder left the party at Courval post office, on June 28. Following Mr. Sauder's instructions, I proceeded north to Morse and then to Swift Current.

From Swift Current we proceeded south over the same route as that followed on the previous occasion as far as Seventy-Mile crossing in Tp. 3, Rg. 13, west of the 3rd meridian. On this occasion we struck east from Seventy-Mile for several miles and then south, coming to the Frenchman river in Sec. 34, Tp. 2, Rg. 12, west of the 3rd meridian. We crossed the river here and followed the west shore to McArthur's ranch, Section 18, Tp. 2, Rg. 11, west of the 3rd meridian. Here we left the river and struck southeast across the bench until we reached the boundary line, and then east to the river. We passed several coulees running into the Frenchman river in Tp. 2, Rgs. 11 and 12, but none had running water.

Leaving the Frenchman river we proceeded east along the boundary line over the same route as on the previous occasion as far as Rocky creek in Sec. 5, Tp. 1, Rg. 6, west of the 3rd meridian. From here we continued in an easterly direction, touching the west branch of Poplar river in Sec. 5, Tp. 1, Rg. 3, west of the 3rd meridian, and the centre, or main, fork of Poplar river in Sec. 8, Tp. 1, Rg. 29, west of the 2nd meridian. The west branch of Poplar river had a very small flow of about 0·08 second-feet. It resembles Wood river in many ways, being from thirty to seventy-five feet wide and from two to three feet deep. It is full of weeds and is very sluggish. The main fork of Poplar river is also sluggish in many places. The banks are very low for some distance on both sides and are probably covered with water during the early spring. The discharge of this stream was 0·8 second-feet.

On account of running short of provisions we travelled north from Poplar river to Willow Bunch. Here, on account of my teamster giving notice of leaving, I decided to return to Swift Current.

From Willow Bunch we followed the pole trail to Wood Mountain and then took the old police or Hudson Bay trail to Seventy-Mile crossing. From Willow Bunch to Wood mountain, we did not pass any streams, although there is considerable moisture supplied by springs. On leaving Wood mountain we travelled by a good trail over a rolling country which brought us across the head-waters of Wood river, which consists of about twelve creeks running north and northeast. Of these creeks only four had running water in them, and, as the country is rolling, there is little possibility of irrigation. Leaving the head-waters of Wood river we crossed the head-waters of several creeks running south into the Frenchman river. These followed deep coulees, but did not have any flow at that time. Apparently the only time of the year that these creeks flow is during the time that the snow is melting or during very heavy rains. From Seventy-Mile crossing we travelled north to Notukeu creek by way of Huff's ranch following the same trails as we did when going south. We then travelled along Notukeu creek to the northeast quarter of Sec. 29, Tp. 9, Rg. 12, west of the 3rd meridian, passing Pierce creek on the way. Pierce creek had a very small flow at its mouth, but I do not think that this flow would be added to if Mr. Pierce were to discontinue using the north fork of this creek for irrigation purposes. The flow above his head-gates is very small and would in all probability disappear before reaching Noteken creek. After leaving Sec. 29, Tp. 9, Rg. 12, west of the 3rd meridian we travelled north to the head-waters of Whisky (or Russell) creek in Sec. 36, Tp. 11, Rg. 13, west of the 3rd meridian. This had a discharge of 1·5 second-feet, but there is little possibility of irrigation. From this point we travelled northwest to Swift Current and did not pass any further streams on the way.

After obtaining another teamster I again left Swift Current and travelled south to the Frenchman river at the boundary line, inspecting Pierce, Notukeu and Bull creeks on the way; also the Frenchman river at Huff's ranch. We followed the same route as on the previous occasion with the exception that when travelling from Seventy-Mile crossing to the boundary line we followed the west shore of Frenchman river as far as Heinrich's ranch in Tp. 1, Rge. 11, west of the 3rd meridian, before striking west to the bench. There are flats along the Frenchman river between McArthur's ranch and Heinrich's ranch which could probably be irrigated by storing water in the coulees which run into Frenchman river.

From Frenchman river we followed the boundary line over the same route as on the former trip as far as Poplar river, inspecting Rocky creek and others crossed on previous occasions. Levels were run on Rocky creek and the west branch of Poplar river. The fall in Rocky creek taken in Sec. 5, Tp. 1, Rg. 6, west of the 3rd meridian, is 2·225 feet per mile, while that in the west branch of Poplar river in Sec. 5, Tp. 1, Rg. 3, west of the 3rd meridian, is 0·5 feet per mile.

From Poplar river (Sec. 1-1-29-2) we continued east over a very rough rolling prairie, crossing the east fork of Poplar river in Sec. 4, Tp. 1, Rg. 26, west of the 2nd meridian. This river has a large flat in Tp. 1, Rg. 26, west of the 2nd meridian, which could be irrigated. The discharge of the river on August 23 was 4·98 second-feet. The country between ranges 25 and 23 was so rough that we had to travel some distance south of the boundary line. No streams were passed until we reached Beaver creek in Sec. 5, Tp. 1, Rg. 23, west of the 2nd meridian, which had a flow of 0·539 second-feet. The country around Beaver creek is very rolling and unsuitable for irrigation. We continued east until we reached Sec. 4, Tp. 1, Rg. 22, west of the 2nd meridian, and, striking a good trail here leading to Plentywood, Montana, and being about out of oats and provisions, we decided to go there to replenish our supply.

From Plentywood we travelled due north to the boundary line at Sec. 1, Tp. 1, Rg. 21, west of the 2nd meridian, and from here to Big Muddy police detachment, in Sec. 10, Tp. 1, Rg. 22, west of the 2nd meridian. There is a large flat here of heavy soil which leads from Big Muddy lake. We followed this flat until we came to the lake and found that there is a very great deal of alkali both at the lake and all along the valley.

Leaving Big Muddy lake we travelled west, crossing the head-waters of Beaver creek in Tp. 2, Rg. 24, west of the 2nd meridian. The country was very rolling and the creeks were either dry or had water standing in pools; none were flowing. On striking the trail to Willow Bunch we followed it until we reached the town.

From Willow Bunch we travelled southwest to Fife lake and then to J. M. Knox's ranch in Sec. 28, Tp. 3, Rg. 3, west of the 2nd meridian. We passed Hay-meadow creek, which has a very large flat along it, and had a discharge of 13·26 second-feet. This, however, was taken after a very heavy rain and the normal discharge of the creek is very probably somewhat less. At J. M. Knox's place there is a large flat which covers the greater part of the northwest and southwest quarters of Sec. 28, Tp. 3, Rg. 30, west of the 2nd meridian. In a coulee in Sec. 29, Tp. 3, Rg. 30, west of the 2nd meridian, there is a large spring which could be used to irrigate the land owned by Mr. Knox. Owing to the porous nature of the soil, which is a heavy sandy loam, the water from this spring disappears in the N.W. quarter of Sec. 28, Tp. 3, Rg. 30, west of the 2nd meridian. Although the country is very hilly for some miles west and south of this point and is probably more suitable for ranching purposes than for agriculture, there are numerous springs throughout the district which lead into small flats which could with small expense be irrigated. Many of the settlers in this district are from the western states and have used irrigation previous to the time of their coming to Canada to live. We made a short trip to a small creek in Sec. 2, Tp. 4, Rg. 1, west of the 3rd meridian, which had a discharge of 0·994 second-feet; there are small flats of about ten acres each which could be irrigated. From J. M. Knox's place we travelled to Mr. Franks' place in Sec. 17, Tp. 4, Rg. 1, west of the 3rd meridian. There is a fine large spring in the S.W. quarter of Sec. 17, Tp. 4, Rg. 1, west of the 3rd meridian, which forms the head-waters of Hay-meadow creek. The fall for several hundred feet from the spring is 1 foot in 100 feet. Mr. Franks could use this spring to irrigate about ten acres in the quarter-section south of him. From this point we travelled to Wood mountain and then followed the same route as we did while Mr. Sauder was with us, as far as Lynthrop in Sec. 1, Tp. 7, Rg. 4, west of the 3rd meridian, taking gaugings of Wood creek in Sec. 20, Tp. 4, Rg. 3, west of the 3rd meridian, and near its mouth at Twelve Mile lake in Sec. 4, Tp. 6, Rg. 3, west of the 3rd meridian. At the latter point the discharge was 4·36 second-feet. This rather large flow was caused by recent heavy rains.

From Lynthrop we travelled northwest to Gravelbourg, crossing Wood river in the N.W. quarter of Section 18, Tp. 10, Rg. 4, west of the 3rd meridian. There is a very good cross-section at this point, and it is the only good place to take gaugings which we met with along the Wood river. The discharge here was 5·21 second-feet. Levels were run along Wood river in Section 31, Tp. 10, Rg. 4, west of the 3rd meridian, which gave a fall of but 0·5 feet per mile. While at Gravelbourg we made a trip north, crossing Notukeu and Wiwa creeks, and touched Wood river in Section 4, Tp. 13, Rg. 4, west of the 3rd meridian. On account of the river being very low the result obtained at the latter point was poor.

On leaving Gravelbourg we travelled west along the township line between Townships 10 and 11 as far as Notukeu creek in Section 5, Tp. 11, Rg. 10, west of the 3rd meridian. The discharge here was 11·76 second-feet. Striking north we crossed Russell creek near its mouth at Section 17, Tp. 11, Rg. 10, west of the 3rd meridian (discharge, 1·183 second-feet), and Mosquito creek in Section 20, Tp. 11, Rg. 10, west of the 3rd meridian. From this latter creek we travelled northwest to Swift Current. On receiving your instructions, dated at Calgary on September 18th, I took the transport and camp equipment to Maple Creek, disposing of it there as per your instruction.

With regard to further work in the Wood Mountain district, there is little possibility of irrigation development outside of the Frenchman river, Rocky creek, and some very small schemes in the townships on the west side of Fife lake, and I do not consider that further data in this district are of sufficient importance to warrant the expense of keeping an outfit in this district another year.

Respectfully submitted,

N. M. SUTHERLAND,
District Hydrographer.

No. 48.

SPECIAL REPORT OF THE COMMISSIONER OF IRRIGATION ON LEVELLING OPERATIONS DURING 1911.

The development of a system of levels over the country is the first step towards studying the possibilities of conserving the natural water-resources and ascertaining how much of the water can be put to beneficial use and where it can be so used. Levelling operations would connect the widespread areas in such a way as to determine the possibilities of taking water from the great river-systems and using their latent potentiality in the form of power production or for irrigation, industrial or domestic purposes. Without making any close investigation it may be said that there is more land that would be benefited by irrigation than there is water available for it, and, therefore, steps should now be taken to ascertain the possibilities of making the maximum use of the water available.

The necessity for this kind of information may not be urgent to-day, but undoubtedly will be in the future, and it is far better to set to work now to develop this information in accordance with a well-thought-out general plan than to take it up hurriedly, at widely separated points, and at greatly increased cost, whenever special information is urgently required.

Some years ago, when the possibilities of irrigation in Canada were first realized, the government undertook some levelling operations which were, to a large extent, the means of developing the possibilities of the two great irrigation schemes now under construction, viz.: the Canadian Pacific Railway scheme at Calgary and the Alberta Railway and Irrigation Company's scheme at Lethbridge. If this work is taken up again it is quite possible that equally great potentialities may be developed in the future.

This work is not a new departure by any means. The idea of developing levels in Western Canada is mainly with a view to developing the natural water-resources, but in all the older countries of the world the topographical features of the land have been developed to a large extent for reasons of general utility. The complete topography of England has been developed by the war department, mainly, it is understood, for the purpose of studying schemes of defence. The topography of practically the whole of the state of New York has been developed to five-foot contours, and the following extract from a paper published in *Engineering News*, September 15, 1910, by E. M. Douglas, Geographer, United States Geological Survey, Washington, D.C., gives a good idea of how much of this work has been done generally in the United States:—

> 'Exact figures for the total number of miles of line run are not available, but the reports of the U.S. Geological Survey show that since 1897, when such work was authorized by Congress, there have been run over 200,000 miles by that bureau alone, in connection with which more than 24,000 substantial metal bench-marks have been established. The levelling by the Corps of Engineers, United States Army, along the Mississippi and

Missouri rivers, amounts to over 5.000 miles. The Lake Survey, in connection with its work, has run nearly 1,000 miles; the Coast and Geodetic Survey more than 13,000, and the Reclamation Service and other bureaus add to the total, so that in all there have been not less than 225.000 miles of line run from which accurate elevations have been determined for more than 30,000 bench-marks on stone or metal.'

The idea in carrying on this work is first, to establish a basic net over the country by levelling over all township lines and setting permanent bench-marks at every township corner. This would give a very good idea of the general topographic features of any section of the country and would be the means of gaining the so-much-needed comparative elevations between the different parts of the country. This work would be carried on first in those districts where the settlement is greatest or where the greatest need for the information is anticipated. Then, when any person undertakes to develop any particular scheme of water-supply or conservation he can tie his detail survey on to any bench-mark which may be convenient and thus relate the elevations of his scheme (which are absolutely the keystone to any water-supply or water-conservation scheme) to the elevations of the surrounding rivers, reservoir-sites, or benchlands, and thus be in a position to work intelligently and without waste of time and money.

The carrying on of this work, and the tabulating of the results by issuing the information in map form, might well be looked upon as an economic method by which the Dominion government might pursue its policy of developing the west by putting in the hands of corporations, companies and the public at large information which would allow them to become acquainted with the possibilities that exist of putting to commercial use Canada's vast water-resources which to-day in the west are, for the most part, lying idle and going to waste.

During the season of 1911 one party was operated in the Maple Creek district with a view to making a start on this work to ascertain how it may best be carried out and to gain some idea of its cost. The result, however, was very unsatisfactory on account of an unfortunate series of circumstances which resulted in very little work being done, the figures of cost, therefore, showing out of all proportion. The weather conditions were adverse, the country in which the party operated turned out to be exceptionally rough, and the services of the engineer in charge, who resigned at the close of the season's work, proved to be most unsatisfactory. The results of the work are published in this report in the form of a table showing the location and elevations of the points determined. (See page 191.)

In order to indicate the class of levelling work that was aimed at, the instructions that were given to the engineer in charge of the party are reproduced here:—

INSTRUCTIONS FOR LEVELLING.

General Instructions:—

1. The lines run shall, as a rule, be the township lines, but section lines may be run exceptionally to avoid heavy bush or very bad country.

2. There will eventually be established a permanent bench-mark at every township corner. This will be done by a party that will follow the levelling party. The levelling party shall drive one 30-inch iron post at every township corner, leaving 4 inches projecting. The top of this post shall be used as a temporary bench-mark, from which the elevations will be transferred to the permanent bench-mark later. These posts should be planted within six feet of the township corner post and be located from it, and at the place where they will be the least liable to disturbance.

(Note.—The permanent bench-marks should have been set immediately, but they were not available till late in the season.)

3. The leveller shall get an elevation upon every natural permanent bench-mark that he can find along the line, and his notes of its description and location should be full enough so that no trouble may be experienced in finding it in future. A cold chisel and hammer should be used for establishing bench-marks in rock.

4. At all township, section and quarter-section corners an elevation shall be taken, on top of the post, and also on the ground at the base of the post.

5. The location of all stream-crossings shall be noted, and an elevation taken on their high and low water marks. Small, unimportant stream-beds should have their cross-sections sketched, showing high and low-water elevations. Larger and more important

streams should have their cross-sections developed with the hand level, showing high and low-water elevations.

6. From every line run the leveller shall sketch in as much of the topography on both sides of the line as he can, without leaving his level to do it.

Instructions re Instrument work:

1. The rodman shall carry a note book, in which he shall enter all the rod readings. The leveller shall set the target on the rod and then the rodman shall note the reading of the rod in his note book. He shall then not touch the target but carry the rod to the level man, who shall then read the rod and note it in his level book. He shall then compare the reading he has in his level book with the reading marked down by the rodman in his note book. This rule is made to eliminate any chance of the rod being wrongly read.

2. Whenever the weather (high wind, rain, or ‘boiling’) is so bad that accurate readings cannot be taken the work should be discontinued.

3. Foresights and backsights shall be of equal length, in so far as is possible. The level man shall have a column in his note book for distances, and every time he reads on a turning point he shall read the distance of the rod with the stadia wires and shall note this distance in the columns of his note book, and then between each bench-mark the leveller shall manipulate the length of his sights so that between each bench-mark the sum of the lengths of the foresights shall be equal to the sum of the lengths of the backsights.

4. The level must be examined daily, or oftener, if necessary, for adjustment; the especially important adjustments are the lines of collimation and the level bubble. The steel pegs furnished must be used at all turning points, and in every case they shall be firmly driven into the ground before the rod is held upon them.

5. The rod shall always be plumbed with a rod level.

6. Bench-marks, or turning points, left at the termination of the work at night, or for rain or other causes, must be selected with great care and located in such a manner that there will be no danger of their being disturbed or tampered with, in order that the rod may be again held on the exact spot.

7. In the ordinary routine of work the two level men shall start at the same corner of a township, and shall run over the township lines in different directions, and when they meet they shall check on each other at least once in every township. The maximum error of closure allowed will be 0·021 feet $\sqrt{\text{distance in miles}}$, or the miles shall be re-run. In locating this error of closure, in order to avoid the duplication of work, it may be advisable, instead of running back on the township lines, to run down the centre line of the township.

8. As each township circuit of levels is completed the error of closure shall be divided up between the two levellers in the proportion of the distances they have run. The elevations of the township corner bench-marks shall be at once adujsted in the following manner:—correction to bench-mark elevation: levellers A's part of closure error = distance from initial point of township to B.M.; total distance run by leveller A; the corrections always being made in the right direction.

9. All the computation in figuring the errors of closure shall be shown in neat work in the leveller's books, so that they may be referred to afterwards.

10. The leveller shall always keep his book indexed up to date, and every day's work must show the figures used in checking the notes, which must be done daily.

No. 49.

REPORT OF THE COMMISSIONER OF IRRIGATION ON RESERVOIR-SITE SURVEYS.

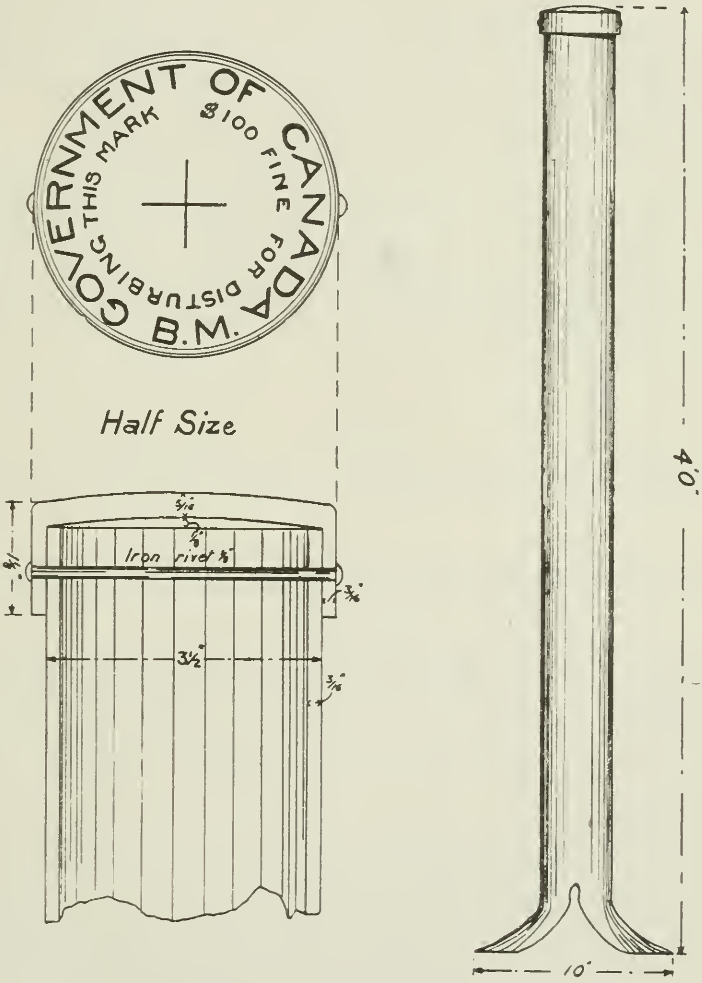
The carrying on of the work of reservoir-site surveys is the detailed development of special conservation schemes based upon the topographic network developed by the levelling operations. The remarks regarding the desirability of carrying on this work are noted in the report on levelling operations and apply also in this case. It should be stated that it is not proposed to carry this work to excess, but merely to inaugurate a policy which will make it possible to deal with the really important problems of conservation as they come up and within a reasonable time to develop them and properly and definitely dispose of them.

If this work is not done in considering, for instance, watersheds of an international character, Canada must be under a great disadvantage as compared with the United States, where most elaborate surveys of this kind have been carried on for years. Under the terms of the Waterways Treaty the details of the division of waters of St. Mary and Milk rivers are entrusted to a joint board of commissioners. In dis-

DEPT. OF THE INTERIOR

IRRIGATION OFFICE

PLAN
OF
PERMANENT IRON BENCH MARK



cussing all the questions in connection with this matter, the Canadian Commissioners cannot advisedly argue for the mode of division most beneficial to Canada without considering the question 'how much of the flood waters or late fall waters can be stored out of the streams in our own territory?' When these questions come up for consideration there will be a sad lack of information, while, on the other hand, the United States Commissioners will have all these data on their side available for reference. This case is cited merely as an instance of what the lack of this class of knowledge will mean to Canada in the future.

The work of this character which had been planned for the past season was upset by a special survey being made of the Bow river reservoirs under the direction of another branch of the Department after all arrangements had been made by the irrigation office to operate a party on this work. The early misunderstandings in connection with the matter, and the later necessary reorganization made the work very late in starting and it was, therefore, confined to a reconnaissance of the Oldman river at the Gap and of the proposed diversion from the South Saskatchewan river near Elbow, Saskatchewan, for supplying water for domestic purposes to that dry country in the vicinity of Moosejaw and Regina. The report on the first mentioned work was submitted to the Water-power Branch of the Department for action and the report on the latter is dealt with separately in this report.

With regard to the proposed diversion from the South Saskatchewan river there is, apparently, a feeling in the minds of many people in the west that the scheme is visionary. It cannot be denied that the scheme is one of great magnitude, involving large expenditure, and that it will require the most careful consideration of experts before it is undertaken, but the fact remains that there is a dry section surrounding Moosejaw and Regina (roughly speaking) within which no large cities or towns can flourish unless an adequate supply of good water for domestic purposes is secured, and the further fact is self-evident that the only available source of such supply is the South Saskatchewan river.

No. 50.

REPORT BY THE COMMISSIONER OF IRRIGATION
ON THE
PROPOSED SOUTH SASKATCHEWAN RIVER DIVERSION CANAL.

HISTORICAL.

Although this scheme has lately been taken up by the government of the province of Saskatchewan it should not be forgotten that the credit of first calling attention to the possibilities of the scheme lies with the irrigation office of the Department of the Interior. Mr. J. S. Dennis first mentions this scheme in his official report for the year 1894, again in the year 1895, and in 1896 published a map showing the location of the proposed canal.

REPORT OF WORK DONE DURING SEASON OF 1911, BY B. RUSSELL, C.E.

When Mr. Russell was instructed to undertake this work it was realized that because of the lack of funds to equip the proper field-parties he would not be able to do more than make merely a preliminary investigation. One proposition in connection with this scheme, which has been looked upon with some favour latterly, was the proposition to pump the water out of the South Saskatchewan river over the height of land and deliver it into the head-waters of the Qu'Appelle river. Mr. Russell's work was confined entirely to developing the critical elevation along these lines and his work consisted of running a series of level lines over several heights of land which showed possibilities of feasibility. Mr. Russell was at this work for one month from August 15 to September 14; and had the assistance of only one rod man and a team and driver.

The results of all Mr. Russell's work is plainly set forth on the plans and profiles submitted in connection with this report, but for purposes of convenient reference the results may be set forth as follows:—

The height of land of Aiktow creek in township 24:—

High-water level in river	1,632	feet.
Height of land, head of Qu'Appelle river	1,720	"
Difference of elevation	88	"

The height of land of Sage creek in township 23:—

High-water level in river	1,644	feet.
Height of land, head of Summit creek	1,916	"
Difference of elevation	272	"

The height of land of Shellstone creek in township 21:—

High-water level in river	1,672	feet.
Height of land, head of Thunder creek	1,975	"
Difference of elevation	303	"

All the elevations given above are to the datum of the Canadian Pacific Railway levels.

It should be noted that the pumping of water over the height of land of Shellstone creek would allow the water to run by gravity down to the city of Moosejaw and from there down into the Qu'Appelle river.

The project of pumping the water over the Aiktow creek height of land and allowing it to flow down the Qu'Appelle river would probably be useless, as it would deliver the water into Buffalo Pond lake at an elevation of 1,627 feet, which is about 117 feet below the elevation of the city of Moosejaw. Then, allowing a grade in the Qu'Appelle river of two feet per mile, as the crow flies, the elevation of the water in the Qu'Appelle river at a point southeast of Regina (about twenty miles from Buffalo Pound lake) would be about 1,587 feet or 275 feet below the elevation of the city of Regina. The bed of the Qu'Appelle river is, moreover, of such a character, viz.: black swamp earth, that any water turned into it for domestic purposes would be badly polluted.

Mr. Russell also developed a cross-section of the South Saskatchewan river at a point about midway between the mouths of Aiktow and Sage creeks for the purpose of making a preliminary study of the cost of a dam. This section will give probably as small a cross-sectional area for a dam as any section that can be found on the river in this vicinity. It was also ascertained that the fall of the river water-service in townships 21 to 24, a distance of 31 miles, is 40 feet, or an average fall of 1·3 feet per mile.

STUDY OF PUMPING AND HIGH LEVEL GRAVITY SCHEME.

Before proceeding with this short study it may be stated that this scheme is a very large one and will be very expensive. It is, therefore, impossible for any person to give an advised judgment on the matter until the topographical features of the country have been fully developed, and the feasibility of dam construction in the South Saskatchewan river fully probed. This study is, therefore, made without any of the requisite information being available, and it must be accepted only as a rough, preliminary study made in an attempt to point out what appears to be the most feasible scheme, together with a rough approximation of the cost.

The purpose to be attained by this scheme is to serve that dry country in what may be termed the Moosejaw and Regina districts, and the basis of the study is the requirement to deliver a gravity supply as far east as Regina and at the elevation of the rails of the Canadian Pacific Railway in that city. The quantity of water to be diverted has been taken as stated in the application made by the government of the province of Saskatchewan, which is about 200 cubic feet per second.

It is submitted, as a matter of opinion only, that the only feasible scheme is to place a dam in the South Saskatchewan river and develop there enough water-power to pump the required quantity of water to a sufficient height on the side-hill of the river from whence it can be run by gravity to meet the requirements of the situation, which is to deliver a gravity supply at the elevation of the Canadian Pacific Railway at Regina. The supply must be delivered during both summer and winter for domestic purposes, and, with this end in view, the available water-power in the river has been based on the figures of minimum winter flow.

The cost of a gravity line has been estimated by assuming that the water would be carried in a circular reinforced concrete pipe. It has been assumed that the demand for water will be equal from the intake to the delivery at Regina, where a flow of 50 cubic feet per second has been allowed, and the total length of 170 miles of pipe line has, therefore, been divided into four sections having, from the intake on, carrying capacities, respectively, of 200, 150, 100 and 50 cubic feet per second. The excavation cost has been based on a level section cut for the trench sufficient to bury and cover the pipe everywhere with six feet of earth. In computing the cost of the dam the section used is that one taken in township 24 between Aiktow and Sage creeks, but, in order to suit the assumed scheme, the dam must be placed somewhere in townships 22 or 23. One fact alone which is liable to make the estimate of the cost of the dam seriously in error is that the bottom of the South Saskatchewan river is known to be most treacherous for the foundations of any structure, and no definite information whatsoever has been gained on this point.

The small-scale map accompanying this report shows the position of the dam and the location of the proposed pipe line, while the calculations following hereafter have been made in such a way that they may be read through understandingly by any person who has followed this preliminary discussion. The unit prices assumed in the estimate are understood to include the cost of many small details and incidentals which have not been calculated. For example, it will not be possible to obtain the minimum excavation section for the pipe line throughout, which will make the quantity of excavation much higher than that calculated.

In conclusion attention may again be drawn to the fact that this study is only a rough approximation and that nothing further can be attempted until the many controlling elements of the scheme have been fully developed by the carrying out of the proper surveys and also river borings to develop the possibilities of a dam foundation.

DETAILED DISCUSSION.

To find the height of dam necessary.

Argument.

H_R = head required for turbines in river to pump Q_C into pipe.
Q_R = available L. W. flow in river assumed = 3000 c.f s.
C_I = efficiency of turbines and direct connected centrifugal pumps assumed = 52%
C_2 = loss due to friction in pipes from pump to delivery assumed = 10%
H_C = height of lift to pipe.
Q_C = quantity required in pipe assumed = 200 c.f.s.
Formula $H_R \times Q_R \times C_I \times (1-C)_2 = H_C \times Q_C$

Study.

Regina elevation..	1,862	feet.
Length of canal..	170	miles.
Grade of canal = 1 in 10,000 or 0·528 ft. per mile.		
Head required for canal = intake to Regina..	89	feet.
Intake of canal (Boldenhurst St.) elevation..	1,951	"
L. W. natural at dam (about)..	1,653	"
Head required at dam (H_R)..	37	"
Top of dam..	1,690	"
Lift required—top of dam to canal intake	261	"

To find the cost of the dam.

The dam section developed on the river gives a cross-sectional area from the river-bottom to the crest of the dam, 37 feet above the lower pool, of 118,000 square feet. A preliminary study of the cost of the dam was made by Mr. W. G. Bligh, M.I.C.E., based on a concrete dam of the arched buttress type. The dam-section used was a very economical one, but of a somewhat bold design, and a rough estimate based on it gave a cost of $600,000. Owing to the uncertainty of the foundations and the many contingencies that might arise it would not be safe to estimate the cost of the dam at any less than $1,000,000.

To find the cost of turbines and pumps.

Theoretic H.P. required = ·001892 Q.H. = 12,600.
Allow cost at $15 per H.P. = $189,000.

To find the cost of pressure pipes from pumps at dam to intake of concrete pipe line.

Q = 200 cu. ft. per second.
V = 3 s.f.
A = 67 sq. ft.
R = 4·6 feet (one large pipe).
Area plates required, including laps, 29 sq. ft. per ft. run.
Half-inch wrt. iron plates, weight per foot run, 580 lbs.
Cost, at 6 cts. per lb., about $35 per foot run.
Cost for 1 mile, $184,800.

To find the cost of concrete pipe.

Argument.

1·30 bbl. cement at $3.00..	$3.90
·44 cu. yd. sand at $1.25..	.55
1 cu. yd. stone at $1.50..	1.50
Total cost ingredients 1 cu. yd. concrete..	$5.95
Cement and stone..	$5.95
55 lbs. steel at 3 cents..	1.65
Forms, labour, and materials..	1.85
Mixing and placing concrete, labour..	85
Placing steel at 0·2 cents	11
Bending steel at 0·06 cents..	3
Moving forms..	30
Cost in place, 1 cu. yd. concrete..	$10.74
Superintendence, plans, contingencies, &c..	1.26
Total cost in place, 1 cu. yd. concrete..	$12.00

To find the cost of excavation.

Argument.

Excavation, cu. yd.	30
Back fill, cu. yd.	10
Cost per cu. yd.	40
Superintendence, plans, contingencies, &c.	5
Total cost, 1 cu. yd. excavation	45

To find cost of pipe line.

The grade throughout has been figured at 1 in 10,000 and the discharge of the pipe has been calculated by the Chezy-Kutter formula, using 'N' = ·012.

Study.

Section No. 1, length 42 miles, capacity 200 c.f.s. (see diagram No. 1_1).

243,714 cu. yds, concrete at $12.00	$ 2,924,568
Cost per mile, $69,632.	
1,757,818 cu. yds. excavation at 45 cents	791,018
Cost per mile, $18,834.	
Total cost	$ 3,715,586
Total cost per mile, $88,466.	

Section No. 2, length 42 miles, capacity 150 c.f.s. (see diagram No. 2_1).

222,192 cu. yds concrete at $12	$ 2,666,304
Cost per mile, $63,481.	
1,576,935 cu. yds. excavation at 45 cents	709,621
Cost per mile, $16,895.75.	
Total cost	$ 3,375,925
Total cost per mile, $80,379.	

Section No. 3, length 43 miles, capacity 100 c.f.s. (see diagram No. 3_1).

152,633 cu. yds. concrete at $12	$ 1,831,596
Cost per mile, $42,595.	
1,354,915 cu. yds. excavation at 45 cents	609,712
Cost per mile, $14,179.34.	
Total cost	$ 2,441,308
Total cost per mile, $56,774.34.	

Section No. 4, length 43 miles, capacity 50 c.f.s. (see diagram No. 4_1).

127,912 cu. yds. concrete at $12	$ 1,534,944
Cost per mile; $35,696.37.	
1,164,715 cu. yds. excavation at 45 cents	524,122
Cost per mile, $12,206.70.	
Total cost	$ 2,059,066
Total cost per mile, $47,885.25.	
Total cost of pipe line laid, 170 miles	$11,591,885

Summary of estimate of cost.

Cost of dam	$ 1,000,000
Cost of turbines and pumps	189,000
Cost of pressure pipes	184,800
Cost of concrete pipe line	11,591,885
	$ 12,965,685
Total cost, about	$ 13,000,000

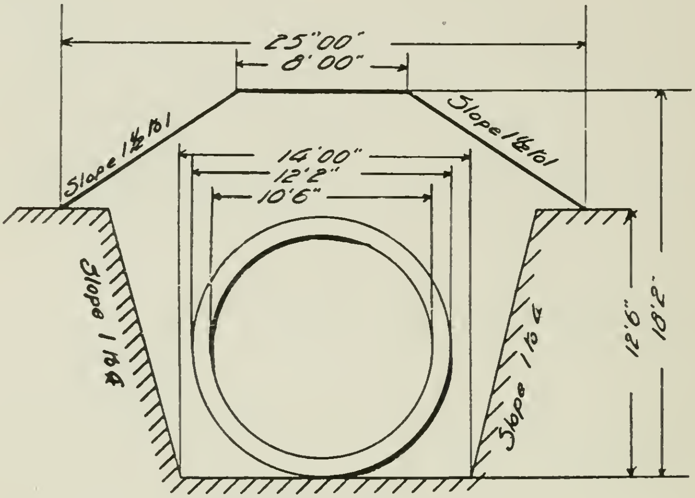


Diagram No. 1.
Showing pipe and excavation for
Section No. 1

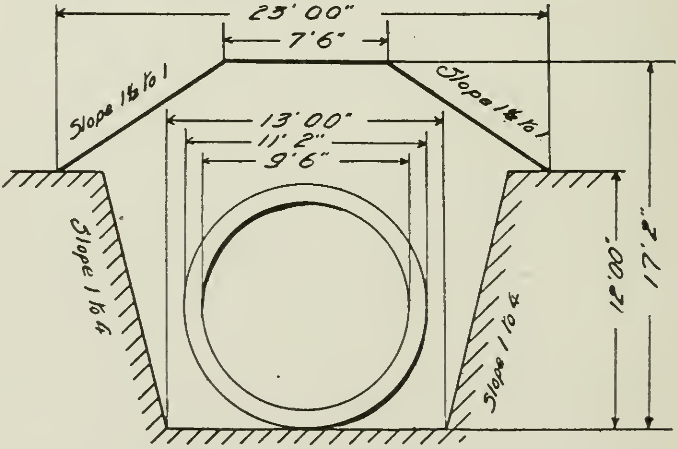


Diagram No. 2.
Showing pipe and excavation for
Section No. 2.

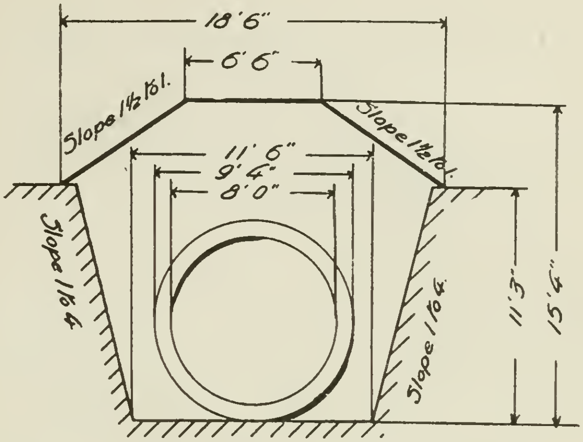


Diagram No. 3.
Showing pipe and excavation for
Section No. 3.

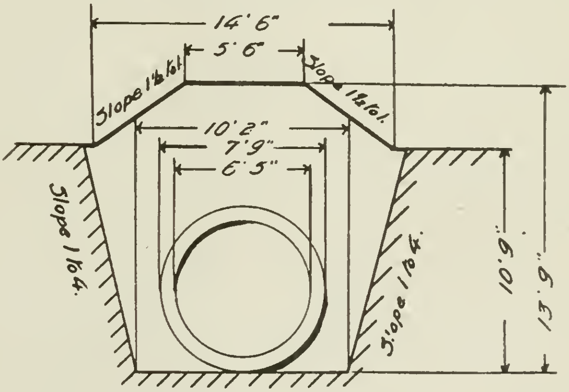


Diagram No. 4
Showing pipe and excavation for
Section No 4.

No. 51.

REPORT ON THE CURRENT METER RATING STATION AT CALGARY, ALBERTA, BY THE COMMISSIONER OF IRRIGATION.

The work of stream measurements has been carried on by the Irrigation Office, Department of the Interior, for a long period of years in the provinces of Alberta and Saskatchewan, but it was not until the early part of 1909 that the great importance of this work was recognized by the Department, and at that time a special Hydrographic Surveys Branch was organized under Mr. P. M. Sauder, C.E., from which time the work of stream measurements has been carried on systematically and extensively.

Prior to this time a current-meter rating station has been established on a slack-water-mill-pond on Bow river, at Calgary, but its equipment was never very satisfactory and it finally fell into bad repair and its use was discontinued. Along with the formation of the hydrographic surveys branch was considered the matter of establishing an up-to-date and efficient current-meter rating station, as it was realized that without this equipment, by which means all current meters used could be frequently rated, the current-meter records would be liable to serious errors.

No active steps were, however, taken in the matter until the winter of 1910, when the plans, specifications and estimate of cost for the station and equipment were prepared by the commissioner. The contract for the work was let to the firm of Jones, Blackshire and Lyttle, of Calgary, on May 29, 1911, and was completed by them on July 21, 1911. In carrying out the construction, the steel reinforcing, the steel rails, the cement and the cars were supplied by the Department, and the city of Calgary laid the water-supply pipe to the edge of the rating-station property. Everything else was included in the contract, except some small electrical fittings which were installed after the work was completed under the commissioner's supervision. The total cost of the station and equipment was $4.475.39. The total estimated cost for the station was $4,690.24.

In designing the work the aim was to devise the most perfect apparatus possible for rating the current meters and to create a permanent structure, so that it was early decided to use concrete in the construction of the necessary tank.

As no stretch of still water having a suitable length and depth was available, it was necessary to create a tank, and in studying its design two points had to be principally considered. First, as the water-supply had to be taken from the city mains, the tank had to be made proof against any leakage, as the city authorities were not willing to guarantee any large supply of water such as might be required if any serious leakage from cracks developed in the tank. Secondly, the cross-sectional water area was required as small as possible and yet of sufficient dimensions to guard against any 'following-on' movement of the water, in running the meters through the tank. To overcome the first difficulty a heavily reinforced structure was designed, such that on being emptied and exposed to the weather in winter no temperature cracks could develop, and the inside faces of the tank were waterproofed by Sylvesters' process. In deciding on the proper cross-section of the tank to overcome the second difficulty no data were obtainable, but with the tank as constructed no following-on movement, or undue disturbance of the water, has been observed, even with the largest meters tested at velocities as high as ten feet per second. The length of the tank (250 feet) was adopted in order to bring the cost of the structure within the limits of the amount of money available, but provision has been made in locating the tank for its future extension to a length of 500 feet, which is desirable in order to attain the highest degree of accuracy.

The several points referred to in the description of the station may be made clear by referring to the accompanying plates. The main features of the station are a car on which the current meter is mounted and by means of which it is then run through the water in the tank at different, uniform rates of speed. The three elements—the distance, the time and the number of revolutions of the meter—are mechanically measured, and from these the velocity of travel of the current meter through the water is related to the revolutions per second of the meter, which relation of revolutions to velocity constitutes the rating of the meter.

The concrete tank is 250 feet long, with an inside width and depth of 6 feet by 5 feet 6 inches, and the depth of water to be maintained is 5 feet. The floor and walls are 8 inches thick and are reinforced heavily, longitudinally and transversely, with ½-inch round, mild steel rods, in order to absolutely prevent any temperature cracks in the concrete. The concrete was specified as a mixture of 1 part Portland cement to 7 parts clean river gravel, to have at least 15 turns in a good machine, and to be placed wet and thoroughly tamped. All the interior faces were thoroughly spaded, in order to create a smooth, close-grained surface to which to apply the Sylvesters' wash. All steel rods at joints were overlapped sixteen inches and it was specified that they were to be wired so as to have contact throughout the whole of the length. The tank floor was laid on an 8-inch foundation of large stones overlaid with smaller stones and gravel, in order to provide thorough drainage for any water which might leak through the tank, so that when the tank is emptied in winter and exposed to the weather no heaving might result from any water being lodged under the tank bottom. The soil beneath is of sandy character, which is permeable to water. The water supply is from a 2-inch iron pipe laid from the city mains, and a 6-inch tile drain 224 feet long, fitted with an iron gate valve at the tank, allows the tank to be emptied at any time into the Bow river. After the tank was completed all the inside faces were treated with two coats of Sylvesters' wash. The tank has been exposed, empty, to several cold snaps with the thermometer at thirty degrees below zero, and no cracking of the concrete has resulted, except a few hair-line cracks near the top of the walls. As regards the waterproofing, two observation shafts were left along the tank sides, running down to the foundation, and no leakage whatever was observed during the summer when the tank was full, except a slight dampness at the bottom of the side walls. It should be noted that another reason why it was desired to make the tank leakproof is that it is intended to obtain records of evaporation at the tank in future seasons.

The track laid along the side of the tank for the car is of 16-pound rails and laid to a gauge of 32⅜ inches on 4 x 6-inch ties, fish plates and bolts being used at every joint. In laying the track the greatest care was exercised to get it laid solid and as level as possible, with close rail-joints, in order that the car should run as smoothly as possible. The measured run of the car is 200 feet, 25 feet being left at each end of the track in which to speed up the car, and the track at one end runs into the car house, where the car is kept under lock and key when not in use.

The original idea was that the car should be mechanically driven by an electric motor working on one of the axles of the car. It is an essential that the rate of travel of the car over its measured course should be uniform, but after much consideration it was found impossible to devise any method of control by which the rate of travel of the car could be kept uniform (without acceleration) throughout its run, if driven by an electric motor or other mechanical means. The car is, therefore, propelled by hand, but its design is such that an electric motor can be easily attached at any future date if any means can be devised of overcoming the difficulty mentioned above.

The main features in the design of the car have been copied from the car used by the Bureau of Standards, United States Government, at the current-meter rating station, at Washington, D.C., blue prints of the design of which were kindly loaned by an officer of the Bureau of Standards. The main features of the car are that the axles run in roller bearings and the platform is attached to the front axle by a pinion joint, which makes the level of the platform entirely dependent on the rear axle, and thus any tendency of the platform to be twisted, due to uneven tracks, is overcome. It is thought that this arrangement eliminates practically all the sharp vertical movements which might otherwise be transmitted to the current-meter in its travel through the water. Two horizontal iron arms project from the car to the centre of the concrete tank. When rating the meter with the rod suspension, the meter rods are clamped in these horizontal arms. When rating the meter with a cord suspension and weights, the vertical cord is run down through the sockets used for clamping the meter rods, and a removable iron arm is used for attaching a wire stay-line to the meter. The car wheels have solid flanges and all the iron in the car is of heavy section, the idea being that, with a heavy car running in easy bearings, it would be easier to maintain a uniform rate of travel than with a light car.

In making the run with the meter the count of the revolutions of the meter and of the time interval are both automatically registered in the car house by electric apparatus. The electric circuits from the car into the car house are made by two trolley wires above the car and one wire laid along the ties between the tracks. The circuit from the meter for the count of the revolutions is made by the two trolley wires, while the circuit for the time interval is made by the ground wire with one auxiliary wire, and one of the trolley wires is used for the return.

The diagram submitted will show the layout of the electric circuits clearly. The distance over which each run is made is 200 feet and this distance is marked by two rods set up vertically on the ties at the side of the car. On the car platform are two electric switches, with long arms projecting over the edge of the car platform, and these, engaging with the two rods at 200 feet interval, close the electric circuit for this interval, running through the commutator box on the meter, and thus the revolutions of the meter over the interval of 200 feet are transmitted to the car house, where they are registered by two electric registers set in series in order to check each other on the count. Some difficulty was experienced at first in getting the electric registers to count accurately when running the meters at high velocities, but this difficulty was overcome by always overhauling the commutator box on the meters and making a fine adjustment of the make-and-break apparatus therein. It will be seen that this method of counting the revolutions is liable to be slightly in error, owing to the fact that the registers do not take any count of the fractional revolution of the meter at either end of the run. This error, however, would be reduced to a minimum by increasing the length of the run.

The time interval is counted by a stop watch, which is operated by a simple electro-magnet, with a padded lever attachment, designed by the commissioner, in exactly the same manner that a stop watch is operated by hand. At each rod, marking the 200-foot interval, the circuit running through the stop watch via the two ground wires has inset a one-nipple push-switch, and lugs, underneath the car, make and break the circuit as the car passes these two points, thus starting and stopping the watch at the respective ends of the 200-foot run and thereby counting the time taken by the car in making the run of 200 feet.

The procedure adopted in rating the meter is to make 20 runs for each meter with velocities varying from 0·5 feet per second to 10 feet per second, the increments in velocity for each run from the low speed to the high being as uniformly distributed between the limits as possible. From the data thus gained the revolutions per second, with their corresponding velocities per second are computed, the points plotted, and among them the most probable curve is drawn. From the rating curve thus constructed the rating table is prepared for use in the field and office, showing

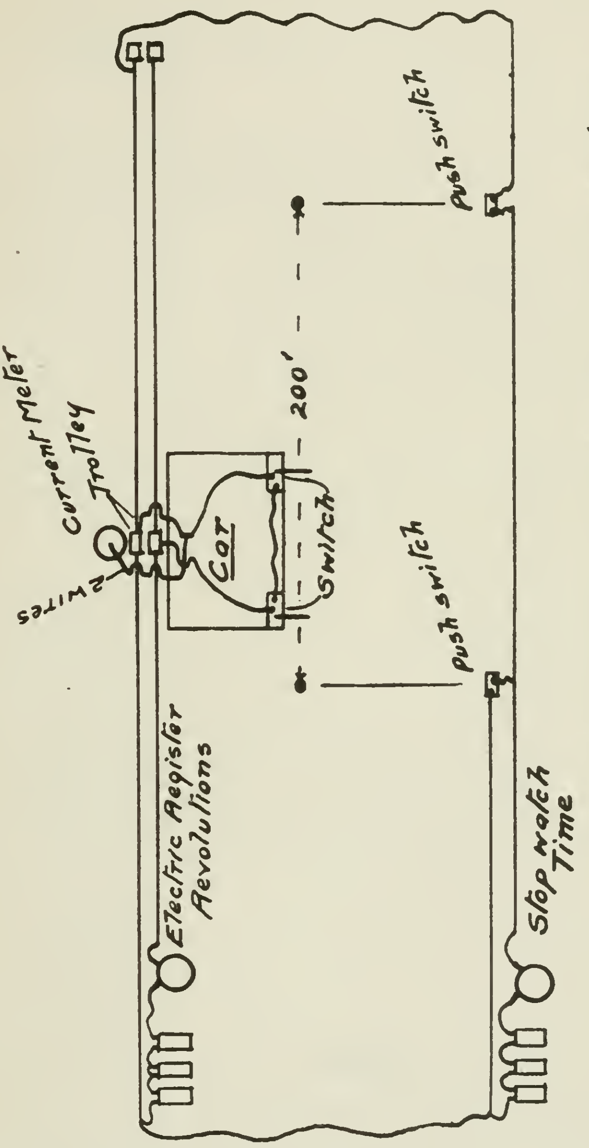


Diagram of Electric Connections

in convenient tabular form the velocities corresponding to the various revolutions per second of the meter from zero velocity up to 10 feet per second. It should here be noted that the rule in the service is not to measure any stream at a section where the average velocity falls below 0·5 feet per second, and a velocity of 10 feet per second is about the highest met with in practice.

Mathematically, the most probable curve is that drawn from values found from normal equations by the method of least squares. It is considered, however, that the method adopted of taking the values from a curve carefully plotted as noted is quite accurate enough to meet all practical requirements, and the saving of time and labour by using this method is very great.

For purposes of keeping a graphical office record of the successive ratings of the meters a separate sheet is prepared for each meter. On this is first plotted, for purposes of comparison, the standard curve for the meter (Gurleys' standard curve for all Price electric meters) and all succeeding ratings of the meter will be plotted on the sheet in different coloured inks, with notes as to the date of ratings, conditions of the meter, &c., until the confusion of many curves will require the preparation of a new curve sheet. Revolutions per second are plotted as ordinates to a scale of 4 inches to one revolution per second, and velocities in feet per second are plotted as abscissæ to a scale of 4 inches to 2 feet per second. For velocities up to 3 feet per second, an auxiliary curve is drawn with the velocity scale increased to 4 inches to 1 foot per second, to allow for greater precision in taking the quantities off the curve.

It is the intention to carry on extensive experimental work in order to determine the various conditions that affect the rating of the current meter, especially as it is desirable to rate every large meter using the two methods of suspension; that is, by meter rods and by cable with stay-line. With the limited time available during the past season it was possible to rate the meters only with the rod suspension. Some of the results obtained, however, are surprising, and worthy of note. The commissioner has had a lengthy experience with the use of the Gurley No. 600 large electric meter, and his idea has always been (and he knows that it was shared by other men of experience) that with continued use, on account of the pivot bearings constantly wearing, the friction was increased and that the revolution of the meter was thereby retarded. The experience of the past summer in rating nine of these meters has indicated that, after considerable use, the meters run fast instead of slow. The evidence indicates that with considerable use the bearing points in the meter wear themselves smoother than they come new from the makers, and hence have less friction than when they are new. The experiments, however, have not been exhaustive enough to prove anything conclusively beyond the fact that, except when perfectly new, no current meter can be relied upon unless it is carefully and frequently rated. The new medium-size type of electric meter (Gurleys' No. 623) has been adopted by this office for the first time this year, and, therefore, no experiments could be made on worn meters of this type. Five meters of this type were tested, of which two had been in light use for one season and three were perfectly new. All of these gave a rating curve practically the same as the standard curve issued by Gurleys, but in every case showing the meter running a little faster than Gurleys' standard.

Of the small electric meters (Gurleys' No. 618) nine were tested and all showed nearly the same results, although four of them had been in use for two seasons and five of them were new. At low velocities the new curve coincided with Gurleys' standard curve, but as the velocities increased the new curve dipped below the standard, which means that the meter was running slower than the standard. This may have been due to the bending, at high velocities, of the small meter rods by which the meter was suspended from the car. This bending from the vertical of the meter rods was actually noticed to take place, but no opportunity was obtained to use a stay-line to keep the rods vertical and thereby test the effect of the bending on the rating of the meter. As indicated above, it is the intention to carry on extensive experiments in the future to determine the effect of the method of suspension of the meter on the rating. In practice, all of the large streams are measured by suspending the meter in the stream with a cord and employing a stay-line to hold the meter up against the current. Under these conditions, especially with high velocities, there is a tendency for the meter to sway continually from side to side at right angles to the current, and it will be interesting and important to determine what effect this has on the revolutions of the meter. Identical conditions will not be obtainable at the rating station, as the length of the cord suspension will, of necessity, be much shorter than that used either from a cable-car station or from a highway-bridge station, and this factor will no doubt enter largely into the amount of sway that the meter will have. Four rating curves are submitted with this report, in order to show graphically actual results obtained in rating meters of different types during the past summer. Explanatory notes have been added (which do not appear on the original office copies) and the curves were selected to show typical cases.

Mr. V. A. Newhall had charge of all the meter ratings during the past season, and, under his direction, the working parts of the station were finally tuned up and the electric switches and recording apparatus were finally adjusted and improved to overcome difficulties met with in operation. To him, also, the commissioner is indebted for the notes on the behaviour of the several types of meters on being rated.

In conclusion it may be said that the irrigation office is prepared to rate any meters that may be sent in by any engineers or others desirous of having their current-meters tested, and a certified rating table will be prepared and returned with the meters. A small fee will be charged to cover only the actual time of the engineer and his assistant employed in making the rating and preparing the table and this fee will be based on the salaries paid to the men by the Department.

TABLES OF PRECIPITATION AND TEMPERATURE IN ALBERTA AND SASKATCHEWAN.

These tables have been prepared from the reports of the Meteorological Service of Canada, and old reports of the irrigation office at Calgary, and both rain and snow have been included under the head of precipitation by estimating ten inches of snow as equivalent to one inch of rain. The headings of the several columns will make the tables quite clear. The tables are being published in their present form in order to facilitate the study of the conditions of precipitation and temperature, both for the whole year and for the irrigation season, as they have actually existed during that period of years for which official records have been gained. It is hoped that the tables will prove useful and instructive in studying the question of water-supply as affecting irrigation.

TABLE OF PRECIPITATION AND TEMPERATURE AT BANFF, ALBERTA.

Year.	Precipitation.		Mean Temperature.		Remarks.
	Total for Year.	Total for Irr. Season.	For Year.	For Irr. Season.	
	In.	In.	Deg. F.	Deg. F.	
1895	....	....	....	....	Snowfall, 92·5.
1896	15·86	5·65	34·3	50·9	
1897	23·40	13·70	34·7	52·8	
1898	20·58	13·86	35·5	52·0	
1899	26·34	17·04	34·0	49·3	
1900	23·29	13·36	37·3	51·0	
1901	19·27	12·10	36·5	49·9	
1902	30·59	21·51	34·8	49·7	
1903	24·82	14·97	35·1	49·9	
1904	14·80	6·70	36·4	51·8	
1905	15·97	11·01	36·8	51·5	
1906	14·58	8·58	37·5	52·6	
1907	23·56	14·89	34·8	49·9	
1908	21·09	10·96	36·82	52·42	
1909	21·56	8·15	33·46	51·64	
1910	16·08	7·65	36·95	51·00	
1911	19·17	10·47	33·51	49·70	
Mean for period	20·68	11·91	35·53	51·00	

TABLE OF PRECIPITATION AND TEMPERATURE AT PINCHER CREEK, ALBERTA.

Year.	Precipitation.		Mean Temperature.		Remarks.
	Total for Year.	Total for Irr. Season.	For Year.	For Irr. Season.	
	In.	In.	Deg. F.	Deg. F.	
1895	20·23	12·43	....	....	Records not complete
1896	....	....	....	....	
1897	....	10·16	39·2	56·6	Rainfall=11·46. Records not complete.
1898	....	....	....	....	No records.
1899	....	....	....	....	"
1900	....	....	....	....	"
1901	....	12·73	41·3	53·7	Records not complete
1902	27·57	22·66	39·1	55·3	
1903	18·05	13·35	39·4	63·4	
1904	9·43	7·32	39·7	55·3	
1905	14·52	9·78	40·9	55·7	
1906	....	18·40	41·5	56·0	" "
1907	....	....	....	....	No records
1908	....	....	....	....	Records not complete
1909	25·91	13·89	37·42	55·46	
1910	....	9·15	....	55·58	" "
1911	....	....	....	....	" "
Mean for period	19·28	12·98	39·81	56·34	

TABLE OF PRECIPITATION AND TEMPERATURE AT MACLEOD, ALBERTA.

Year.	Precipitation.		Mean Temperature.		Remarks.
	Total for Year.	Total for Irr. Season.	For Year.	For Irr. Season.	
	In.	In.	Deg. F.	Deg. F.	
1895	......	......	......	......	Records not complete
1896	12·73	8·71	40·8	59·2	
1897	12·77	7·43	41·8	61·4	
1898	13·58	9·95	42·2	60·0	
1899	17·76	11·63	38·7	56·8	
1900	10·08	6·79	43·1	58·6	
1901	12·21	9·95	42·4	56·4	
1902	......	7·48	......	57·1	Records not complete
1903	......	5·43	......	56·0	" "
1904	5·34	3·71	39·8	55·6	
1905	11·63	6·75	41·9	58·2	
1906	20·82	15·18	40·3	56·5	
1907	12·48	9·20	39·2	54·3	
1908	18·11	13·77	41·76	57·7	
1909	14·78	10·02	38·76	57·8	
1910	......	......	44·19	58·78	Records not complete
1911	......	15·15	38·66	55·42	" "
Mean for period	13·52	9·41	40·97	57·49	

TABLE OF PRECIPITATION AND TEMPERATURE AT LETHBRIDGE, ALBERTA.

Year.	Precipitation.		Mean Temperature.		Remarks.
	Total for Year.	Total for Irr. Season.	For Year.	For Irr. Season.	
	In.	In.	Deg. F.	Deg. F.	
1902	28·13	24·48	41·5	56·9	
1903	14·82	10·74	41·7	57·0	
1904	11·40	7·33	42·4	60·2	
1905	13·78	10·24	43·7	60·1	
1906	22·48	16·60	43·7	59·9	
1907	15·50	11·75	41·4	57·0	
1908	16·16	11·94	43·98	59·78	
1909	11·69	7·57	39·98	59·72	
1910	7·34	4·16	44·88	59·98	
1911	22·03	17·29	39·67	57·08	
Mean for period	16·33	12·21	42·29	58·76	

TABLE OF PRECIPITATION AND TEMPERATURE AT CALGARY, ALBERTA.

Year.	Precipitation.		Mean Temperature.		Remarks.
	Total for Year.	Total for Irr. Season.	For Year.	For Irr. Season.	
	In.	In.	Deg. F.	Deg. F.	
1885	12·91	9·32	37·05	53·6	
1886	11·32	5·98	38·04	56·2	
1887	13·69	9·12	33·86	54·1	
1888	17·51	11·29	35·15	54·6	
1889	11·59	6·41	39·54	54·7	
1890	14·94	10·86	35·68	54·5	
1891	10·44	8·74	37·71	55·0	
1892	7·91	5·13	36·12	53·6	
1893	11·05	7·17	31·76	53·9	
1894	11·71	8·62	37·17	55·3	
1895	15·12	10·99	36·66	53·1	
1896	16·05	8·12	36·00	55·6	
1897	20·58	15·02	37·10	57·8	
1898	15·58	11·84	37·80	56·6	
1899	26·15	21·46	34·70	53·0	
1900	17·57	12·18	38·60	54·1	
1901	22·31	16·47	39·20	53·3	
1902	34·57	30·75	37·00	52·7	
1903	22·77	19·91	37·50	52·6	
1904	11·89	8·71	36·90	54·2	
1905	14·12	10·02	39·00	54·6	
1906	16·24	13·50	39·30	55·6	
1907	14·96	11·48	36·70	52·66	
1908	18·25	15·68	40·69	56·02	
1909	16·03	11·98	35·97	55·78	
1910	11·79	8·53	37·88	54·98	
1911	19·38	15·08	35·67	52·68	
Mean for period	16·16	11·99	36·99	54·47	

TABLE OF PRECIPITATION AND TEMPERATURE AT EDMONTON, ALBERTA.

Year.	Precipitation.		Mean Temperature.		Remarks.
	Total for Year.	Total for Irr. Season.	For Year.	For Irr. Season.	
	In	In.	Deg. F.	Deg F.	
1895	14·68	8·99	36·7	54·6	
1896	15·24	8·89	34·8	56·0	
1897	14·55	10·93	36·7	58·3	
1898	10·91	6·68	38·2	58·5	
1899	20·89	15·30	34·6	54·9	
1900	27·81	17·73	37·8	55·8	
1901	27·53	21·19	39·0	55·1	
1902	20·66	16·36	36·9	55·2	
1903	21·06	15·05	37·6	54·5	
1904	18·87	11·52	36·1	55·6	
1905	15·56	12·98	39·6	56·9	
1906	....	10·47	....	57·3	Records not complete.
1907	9·88	4·94	35·2	53·4	
1908	....	13·57	....	56·76	" "
1909	12·88	9·01	33·88	57·20	
1910	14·93	11·05	38·38	55·66	
1911	20·67	17·05	35·99	55·46	
Mean for period	17·74	12·45	36·76	55·95	

TABLE OF PRECIPITATION AND TEMPERATURE AT MEDICINE HAT, ALBERTA.

Year.	Precipitation.		Mean Temperature.		Remarks.
	Total for Year.	Total for Irr. Season.	For Year.	For Irr. Season.	
	In.	In.	Deg. F.	Deg. F.	
1883	1·55	....	....	....	Oct., Nov., Dec.
1884	14·93	11·27	37·77	59·9	
1885	9·37	6·77	42·67	61·5	
1886	6·72	4·02	42·27	64·0	
1887	9.89	7·55	37·78	60·8	
1888	14·54	12·26	38·64	60·5	
1889	7·98	5·09	42·42	61·2	
1890	9·13	7·16	39·67	61·6	
1891	13·65	9·41	41·34	61·4	
1892	12·24	7·03	39·69	61·6	
1893	14·60	8·38	37·15	60·4	
1894	13·14	8·16	41·48	62·4	
1895	14·13	9·84	39·70	59·1	
1896	17·88	9·33	39·90	61·2	
1897	17·27	10·41	39·90	63·6	
1898	15·90	7·73	40·90	62·1	
1899	22·28	15·97	39·90	59·7	
1900	21·39	13·52	43·60	62·2	
1901	20·80	15·79	43·30	59·6	
1902	13·90	9·41	41·50	59·9	
1903	9·90	8·03	41·90	59·9	
1904	9·70	5·93	42·00	62·2	
1905	8·99	6·81	43·80	61·8	
1906	12·62	9·31	48·00	62·4	
1907	6·86	4·89	40·70	59·46	
1908	10·22	7·83	44·69	63·18	
1909	9·80	7·16	41·13	63·62	
1910	....	5·19	....	62·44	Records not complete
1911	....	10·85	....	60·46	" " "
Mean for period	12·99	8·75	41·22	61·37	

TABLE OF PRECIPITATION AND TEMPERATURE AT SWIFT CURRENT, SASKATCHEWAN.

Year.	Precipitation.		Mean Temperature.		Remarks.
	Total for Year.	Total for Irr. Season.	For Year.	For Irr. Season.	
	In.	In.	Deg. F.	Deg. F.	
1886	10·62	5·17	37·62	60·7	
1887	18·01	12·17	31·73	57·4	
1888	14·09	8·94	35·37	57·5	
1889	10·46	6·73	39·02	57·9	
1890	17·50	10·14	36·02	58·0	
1891	24·55	16·16	36·76	57·2	
1892	20·25	10·42	35·90	58·4	
1893	13·87	6·80	33·78	57·5	
1894	9·66	5·80	38·03	61·3	
1895	12·33	9·46	36·60	56·9	
1896	14·11	9·32	37·70	59·0	
1897	16·24	11·24	38·00	62·1	
1898	15·25	9·37	37·90	59·7	
1899	19·38	14·91	35·50	57·1	
1900	14·60	11·52	40·80	60·8	
1901	18·58	14·86	40·20	59·0	
1902	17·64	13·99	38·40	57·6	
1903	18·38	13·68	38·20	56·6	
1904	12·84	8·37	37·50	58·5	
1905	15·68	12·61	40·10	58·9	
1906	19·02	13·72	39·80	58·7	
1907	13·17	8·56	35·80	55·1	
1908	12·60	5·82	39·71	59·6	
1909	19·26	16·60	36·02	59·6	
1910	10·47	7·84	40·67	57·8	
1911	14·28	10·95	....	....	Records not complete.
Mean for period	15·49	10·58	37·48	58·5	

TABLE OF PRECIPITATION AND TEMPERATURE AT CHAPLIN, SASKATCHEWAN.

Year.	Precipitation.		Mean Temperature.		Remarks.
	Total for Year.	Total for Irr. Season.	For Year.	For Irr. Season.	
	In.	In.	Deg. F.	Deg. F.	
1883	2 20	...	...	...	Oct., Nov., Dec.
1884	18·94	12·08	34·24	60·48	
1885	...	...	...	...	Record not complete
1886	...	3·63	...	56·14	" "
1887	5·37	2·05	34·97	61 06	
1888	4·91	1·86	35·81	60 66	
1889	3·78	1·88	39·91	61·94	
1890	5·26	1·98	38 13	59·96	
1891	...	...	37·72	60 80	" "
1892	...	...	...	...	" "
1893	2·91	0 72	34·21	62 00	
1894	4·08	0·72	37 19	62·28	
1895	5·58	2·52	34·30	54·60	
1896	9·66	5·41	34·60	57·30	
1897	6·56	2 77	35·00	60·50	
1898	6·40	3·73	36·80	61·10	
1899	5·90	3·61	33·10	56·00	
1900	4·77	1·84	38·00	59·10	
1901	4·42	2·30	37·60	58·70	
1902	9·26	6·32	37·50	59·10	
1903	...	...	...	...	" "
1904	...	...	...	...	" "
1905	11·63	6·75	...	60·60	
1906	20·23	11·90	36·10	57·60	
1907	24·08	14·93	30·90	52·72	
1908	15·11	7·99	35·78	56·92	
1909	22 13	16·01	33·19	58·32	
1910	13 29	9·42	37·56	56·60	
1911	20·48	13 32	32·58	54·86	
Mean for period	9·87	5·81	35·64	58·72	

TABLE OF PRECIPITATION AND TEMPERATURE AT MOOSEJAW, SASKATCHEWAN.

Year.	Precipitation.		Mean Temperature.		Remarks.
	Total for Year.	Total for Irr. Season.	For Year.	For Irr. Season.	
	In.	In.	Deg. F.	Deg. F.	
1895	...	...	33·7	56·1	Rainfall 9·32 in.
1896	...	...	33·3	56·9	” 9·89 in.
1897	...	3·23	33·8	60·1	Precipitation for year not known.
1898	...	...	34·3	57·4	Rainfall 8·02 in. snowfall not known.
1899	...	11·18	32·1	55·9	Rainfall 12·04 in.; snowfall not known.
1900	...	...	36·3	58·7	Precipitation for year not known.
1901	...	12·90	36·5	57·5	Rainfall 12·75 in.; snowfall not known.
1902	...	9·26	34·8	55·5	Rainfall 9·73 in.; snowfall not known.
903	...	15·97	34·3	54·6	Rainfall not known.
1904	...	11·56	33·2	55·8	Rainfall 12·53 in.; snowfall not known.
1905	18·72	16·02	36·5	56·8	
1906	...	14·39	36·7	58·2	
1907	...	8·08	31·5	52·7	Rainfall 9·20 in.; snowfall not known.
1908	...	...	...	...	Records not complete.
1909	18·94	14·95	35·11	60·3	
1910	12·60	9·13	38·98	58·4	
1911	...	11·69	...	56·6	Records not complete.
Mean for period	16·75	11·53	34·72	56·9	

TABLE OF PRECIPITATION AND TEMPERATURE AT REGINA, SASKATCHEWAN.

Year.	Precipitation.		Mean Temperature.		Remarks.
	Total for Year.	Total for Irr. Season.	For Year.	For Irr. Season.	
	In.	In.	Deg. F.	Deg. F.	
1883	......	4·29	......	......	May, June, July.
1884	11·46	7·91	......	......	Records not complete.
1885	4·89	1·01	32·81	55·90	
1886	1·90	0·29	32·92	60·54	
1887	2·42	1·43	30·54	57·80	
1888	10·75	6·43	31·63	57·70	
1889	4·39	1·61	36·49	58·04	
1890	13·63	9·55	34·17	57·32	
1891	14·82	11·14	33·21	56·56	
1892	12·52	7·35	31·52	56·98	
1893	8·05	3·54	30·17	58·06	
1894	......	2·74	......	61·48	May, June, July.
1895	11·30	9·14	32·20	56·00	
1896	18·90	14·31	32·40	57·30	
1897	9·32	5·53	33·20	59·50	
1898	13·28	11·45	32·80	57·50	
1899	......	7·93	32·00	55·60	Records not complete.
1900	11·81	9·61	......	59·40	" "
1901	19·02	16·07	35·30	58·30	
1902	15·22	13·10	35·50	54·90	
1903	......	13·58	33·50	55·00	" "
1904	15·38	10·48	32·10	55·40	
1905	18·05	14·78	35·00	56·30	
1906	18·81	14·02	35·80	58·10	
1907	14·17	11·63	......	......	" "
1908	14·24	9·48	34·75	56·56	
1909	20·27	16·12	32·42	58·56	
1910	13·81	10·16	36·30	56·12	
1911	18·55	13·41	31·88	55·26	
Mean for period	12·67	8·89	33·19	57·31	

TABLE OF PRECIPITATION AND TEMPERATURE AT QU'APPELLE, SASKATCHEWAN.

Year.	Precipitation.		Mean Temperature.		Remarks.
	Total for Year.	Total for Irr. Season.	For Year.	For Irr. Season.	
	In.	In.	Deg. F.	Deg. F.	
1895	11·23	6·70	33·0	55·5	
1896	21·63	15·01	33·1	57·1	
1897	12·65	8·38	34·0	59·7	
1898	21·65	14·24	34·2	57·7	
1899	19·25	11·75	32·1	55·8	
1900	16·52	9·69	36·4	59·6	
1901	26·47	16·05	36·3	58·2	
1902	24·37	14·44	35·7	56·7	
1903	20·09	15·53	35·0	55·3	
1904	22·22	11·92	34·0	56·3	
1905	24·57	19·73	37·0	57·0	
1906	20·39	13·14	37·2	59·1	
1907	18·53	14·76	....	....	Records not complete.
1908	18·69	10·14	36·0	56·9	
1909	25·75	17·52	32·9	57·9	
1910	20·66	13·52	36·8	55·7	
1911	....	....	....	....	Records not complete.
Mean for period	20·25	13·28	34·9	57·2	

TABLE OF PRECIPITATION AND TEMPERATURE AT INDIAN HEAD, SASKATCHEWAN.

Year.	Precipitation.		Mean Temperature.		Remarks.
	Total for Year.	Total for Irr Season.	For Year.	For Irr. Season.	
	In.	In.	Deg. F.	Deg. F.	
1895	....	....	33·0	55·8	Records not complete.
1896	....	....	32·3	56·7	Ann. rainfall 11·19 in.
1897	....	13·05	33·1	59·7	Records not complete.
1898	20·63	16·03	33·3	57·3	
1899	....	9·84	31·5	55·9	" "
1900	15·46	11·84	35·5	59·2	
1901	23·26	17·42	35·1	58·3	
1902	16·01	10·49	34·2	56·0	
1903	18·95	14·99	34·1	55·1	
1904	20·09	11·45	32·7	55·8	
1905	22·77	18·45	36·2	56·6	
1906	17·61	11·64	36·4	58·6	
1907	18·13	14·65	31·6	52·6	
1908	18·31	10·96	35·6	57·2	
1909	19·59	14·08	33·2	58·7	
1910	....	12·64	36·7	57·3	Records not complete.
1911	23·62	15·75	32·4	56·2	
Mean for period	19·54	13·55	33·9	56·8	

TABLE OF PRECIPITATION AND TEMPERATURE AT BATTLEFORD, SASKATCHEWAN.

Year.	Precipitation.		Mean Temperature.		Remarks.
	Total for Year.	Total for Irr. Season.	For Year.	For Irr. Season.	
	In.	In.	Deg. F.	Deg. F.	
1891	....	7·27	....	57·28	
1892	11·06	10·07	34·03	58 26	
1893	10 95	9·34	30·81	56·98	
1894	13·47	9 33	34·92	59·46	
1895	12·01	10·17	32·70	54·90	
1896	12·93	8·35	32·50	58·00	
1897	16·53	13·62	34·00	60·20	
1898	14·24	9·50	34·00	58·90	
1899	18·42	14·34	32·49	56·80	
1900	20·41	26·71	34·90	58·20	
1901	16·57	12·47	35·70	57·40	
1902	13·49	9·40	34·30	56·50	
1903	16·06	11·46	33·90	55·40	
1904	16·60	10·38	33·40	56·50	
1905	10·62	8·79	37·10	57·60	
1906	16·64	7·88	36·80	59·20	
1907	10·11	8·81	32·20	54·80	
1908	15·92	12·27	35·13	57 46	
1909	9·62	8·85	30 52	59·90	
1910	7·85	7·38	36·50	57·34	
1911	....	16·87	....	55·76	Records not complete.
Mean for period	13·55	10·63	33 99	57·47	

TABLE OF PRECIPITATION AND TEMPERATURE AT SASKATOON, SASKATCHEWAN.

Year.	Precipitation.		Mean Temperature.		Remarks.
	Total for Year.	Total for Irr. Season.	For Year.	For Irr. Season.	
	In.	In.	Deg. F.	Deg. F.	
1895	....	....	....	....	Records not complete.
1896	....	....	....	....	" "
1897	....	....	....	....	" "
1898	....	....	....	....	" "
1899	....	....	....	....	" "
1900	....	....	....	58·7	" "
1901	....	....	....	56·7	" "
1902	....	....	31·7	54·0	" "
1903	....	....	31·5	55·1	" "
1904	19·50	12·81	31·7	54·7	
1905	10·85	9·14	34·9	55·6	
1906	19·51	12·81	31·7	54·7	
1907	10·38	7·77	30·1	52·6	
1908	14·15	9·68	....	56·9	" "
1909	15·87	11·09	32·03	59·72	
1910	10·75	8·97	36·23	56·40	
1911	19·42	13·08	31·92	55 08	
Mean for period	15·05	10·67	32·42	55·85	

TABLE OF PRECIPITATION AND TEMPERATURE AT PRINCE ALBERT, SASKATCHEWAN.

Year.	Precipitation.		Mean Temperature.		Remarks.
	Total for Year.	Total for Irr. Season.	For Year.	For Irr. Season.	
	In.	In.	Deg. F.	Deg. F.	
1895	14·14	8·67	31·8	54·7	
1896	19·64	10·11	30·6	55·8	
1897	18·03	10·46	32·4	57·7	
1898	15·79	8·90	32·7	56·7	
1899	29·88	21·51	30·5	55·0	
1900	22·40	15·41	33·2	56·4	
1901	19·46	14·00	34·0	56·5	
1902	20·01	13·83	33·2	55·4	
1903	16·87	10·50	32·2	53·4	
1904	16·60	10·69	31·7	54·6	
1905	19·27	14·08	34·9	56·1	
1906	17·05	8·71	34·5	56·7	
1907	......	......	......	......	Records not complete.
1908	......	......	......	......	" "
1909	18·64	11·37	30·95	57·98	
1910	7·40	3·88	35·03	55·42	
1911	......	13·24	......	54·30	" "
Mean for period	18·13	11·69	32·69	55·71	

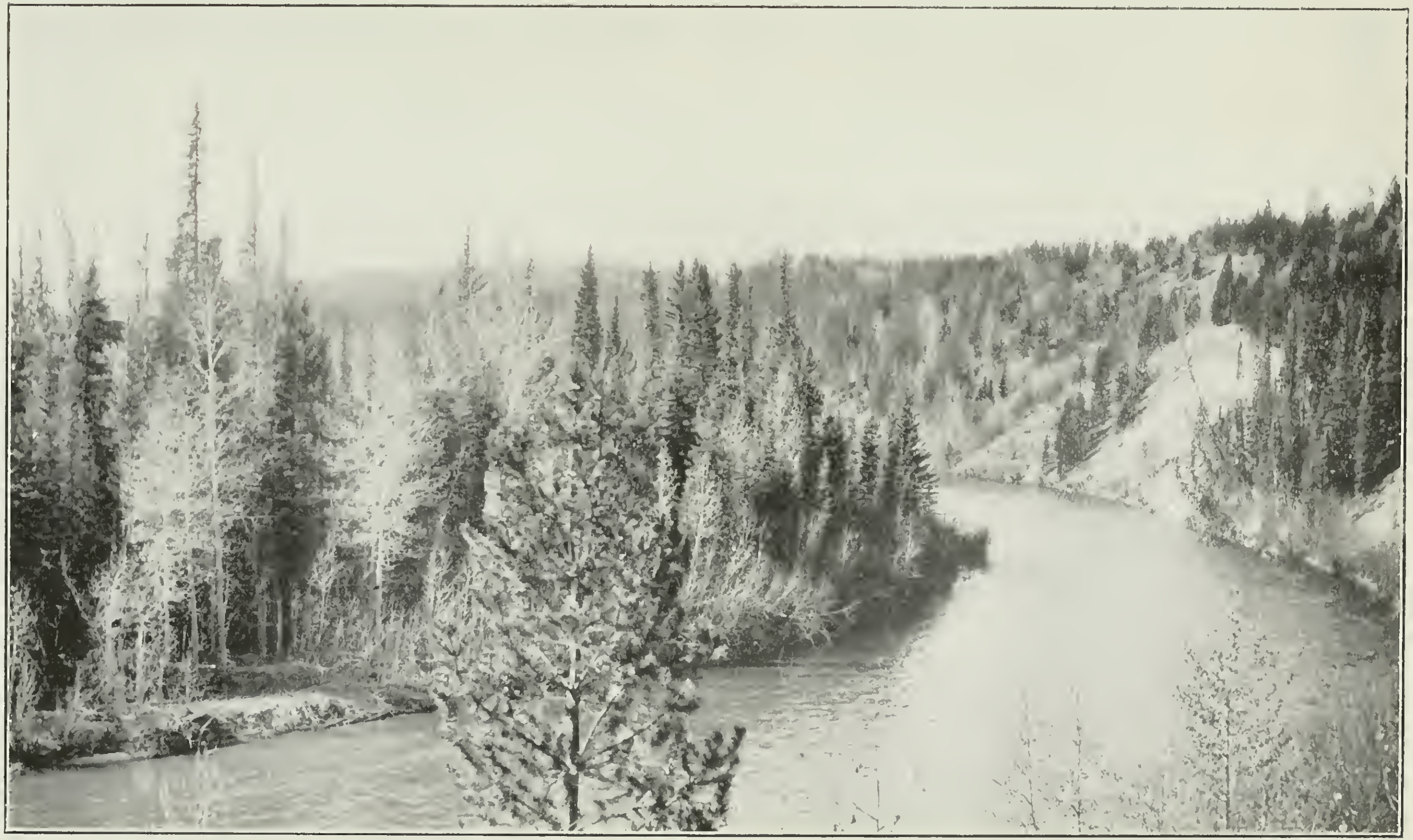


Photo E. H. Finlayson, 1911.

Brazeau Forest Reserve : Cut-Banks and Spruce Flats on Hay River.
Tp. 55, Range 25, west of 5th Meridian.

Photo G. H. Edgecombe, 1911.

View in Bighorn River District, above the Falls of the River.

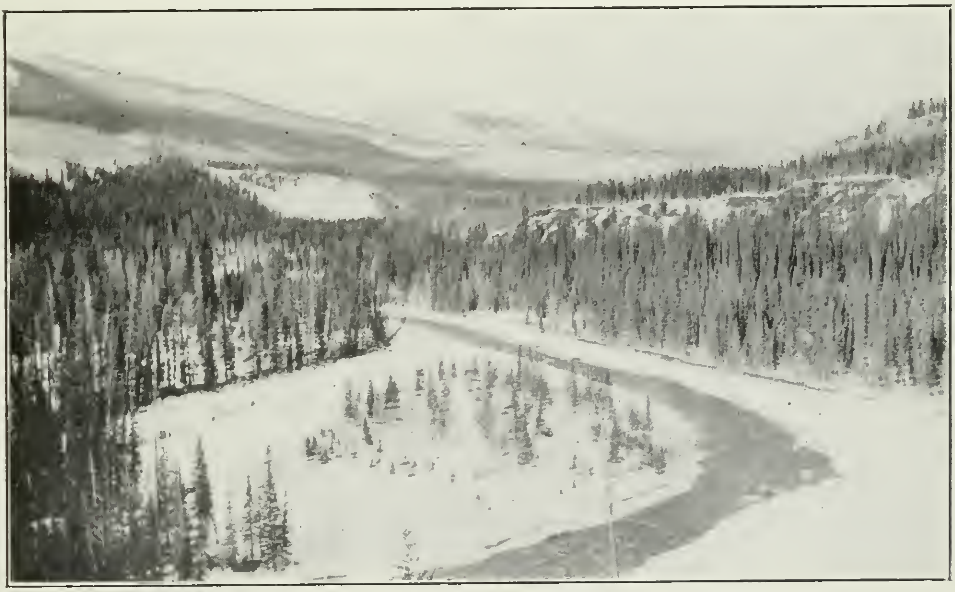


Photo G. H. Edgecombe, 1911.

Athabaska Forest Reserve: View in Stony River District immediately north of Jasper Park.

Photo J. T. Blackford, June, 1911.

Norway House Indians Taking the Pledge to Help in the Prevention of Forest Fires. Chief Councillors in the Foreground.

Photo E. F. Drake Oct., 1911.

Fire Patrol Boat No. 1 at Athabaska Landing.

Photo W. J. Vandusen, 1911.
Porcupine Forest Reserve: Pack Train passing through a Grove of Jack Pine.

Photo W. J. Vandusen, 1911.
Porcupine Forest Reserve: Slash and High Stumps Left after Lumbering.
Sec. 35, Tp. 38, Rg. 28, west of 1st Meridian.

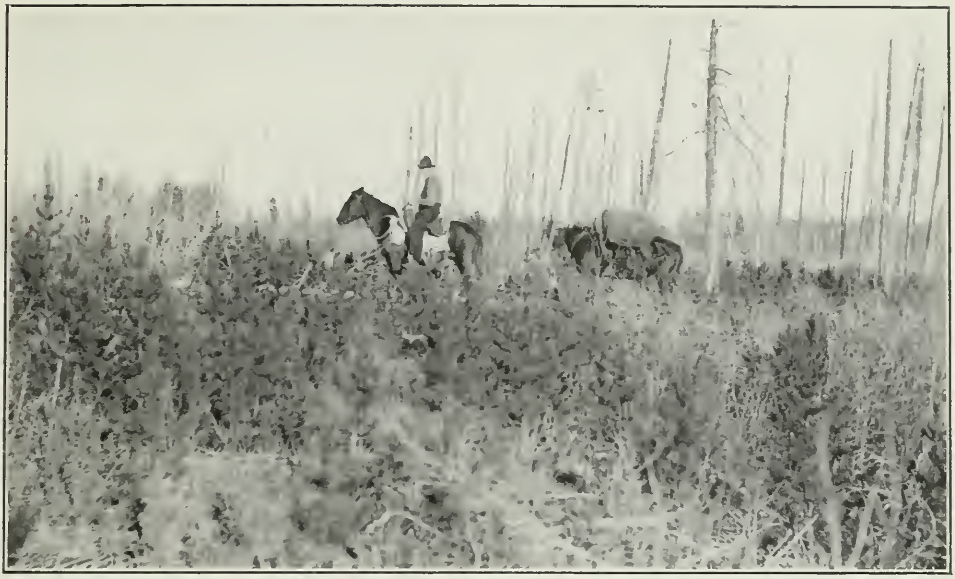


Photo D. Roy Cameron, 1911.
Lesser Slave Lake District: Lodgepole Pine Reproduction
Tp. 63, Rg. 7, west of 5th Meridian.

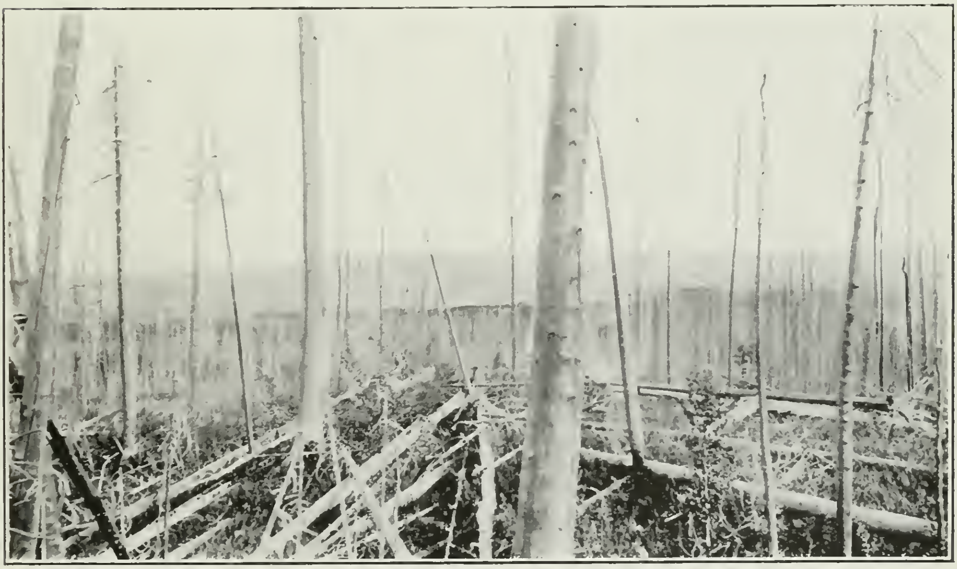
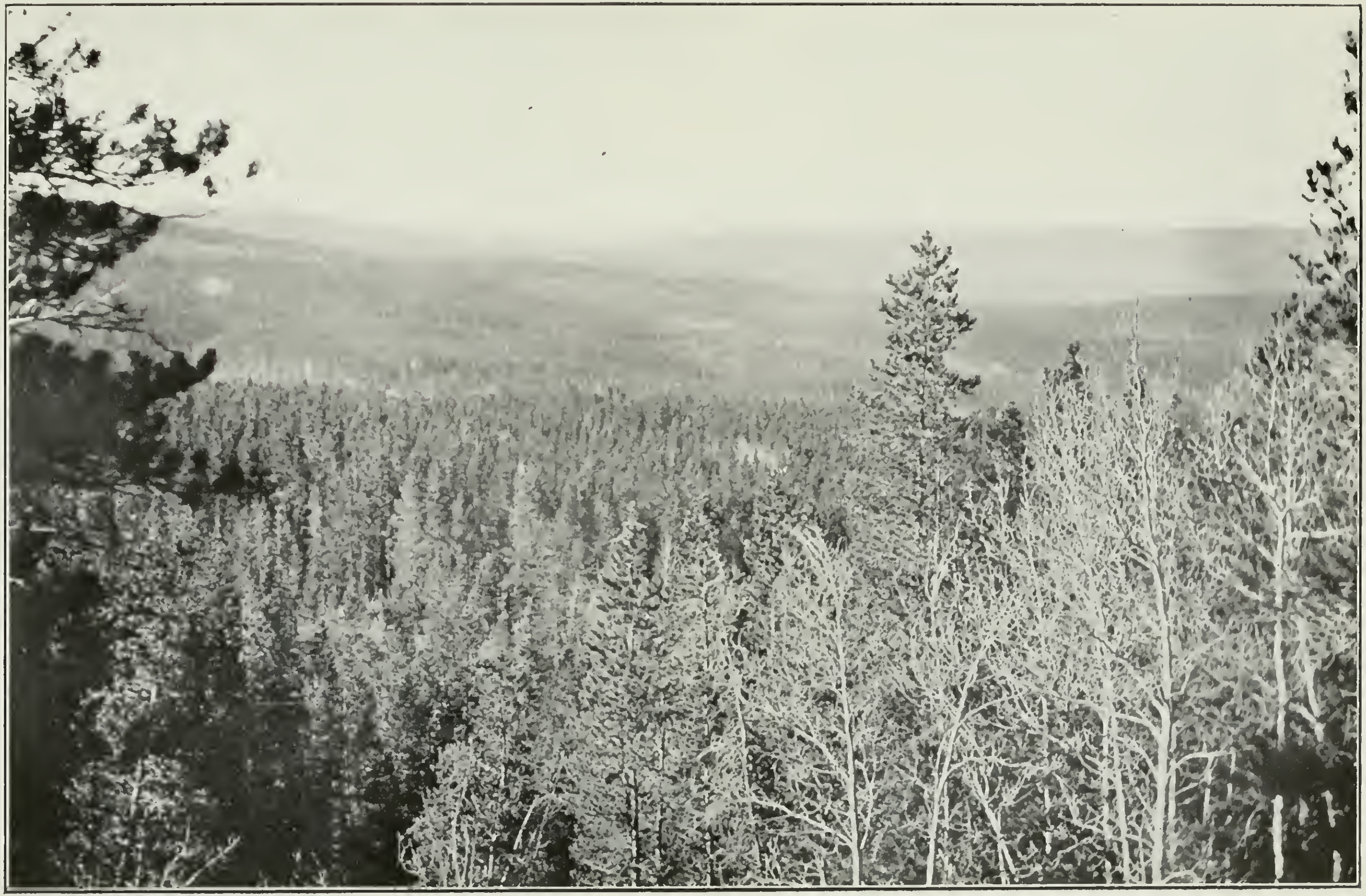


Photo D. Roy Cameron, 1911.
Lesser Slave Lake District: Part of Great Brulé at Head-waters of Assineau River.
Tp. 72, Rg. 8, west of 5th Meridian.



Lesser Slave Lake District: Lodgepole Pine, Slopes Type.
Head-waters of Assineau River

Photo D. Roy Cameron, 1911.

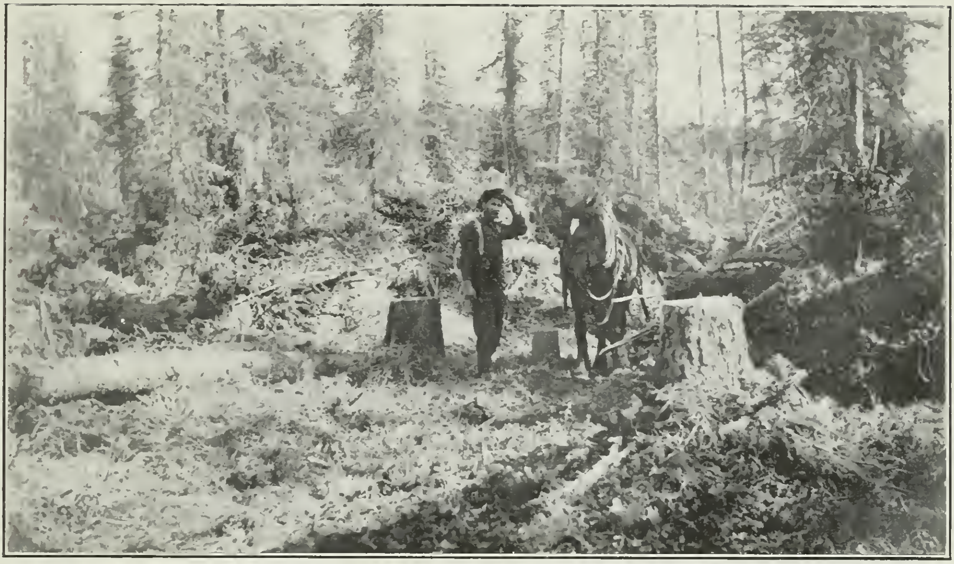


Photo G. H. Edgecombe, 1911.

Brazeau Forest Reserve: High Stumps and Slash Left by Unregulated Lumbering.

Photo E. H. Finlayson, 1911.

Athabaska Forest Reserve: Typical Poplar-pine Country above Athabaska Flats.

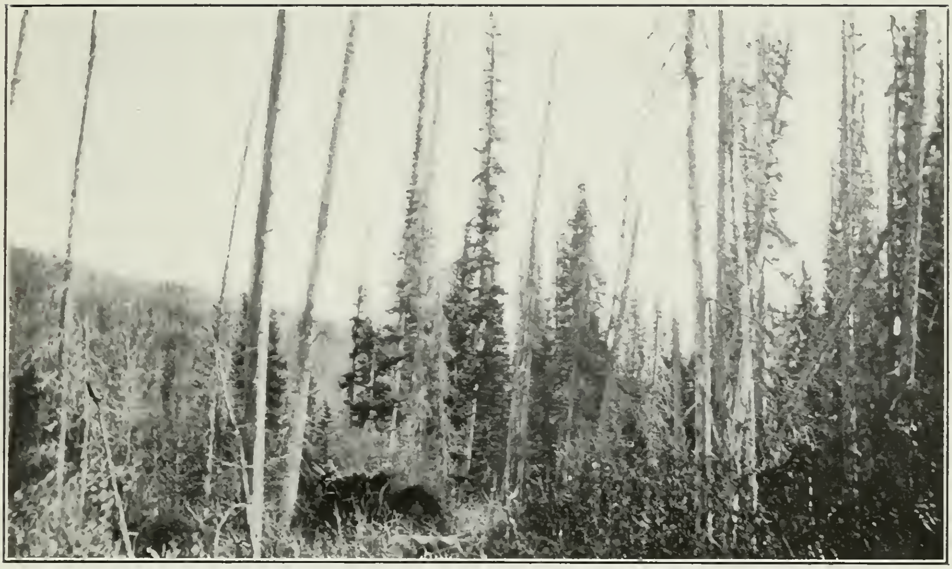


Photo G. H. Edgecombe, 1911.

Athabaska Forest Reserve: Black Spruce Swamp, after Fire.
Tp. 51, Rg. 25, west of 5th Meridian.

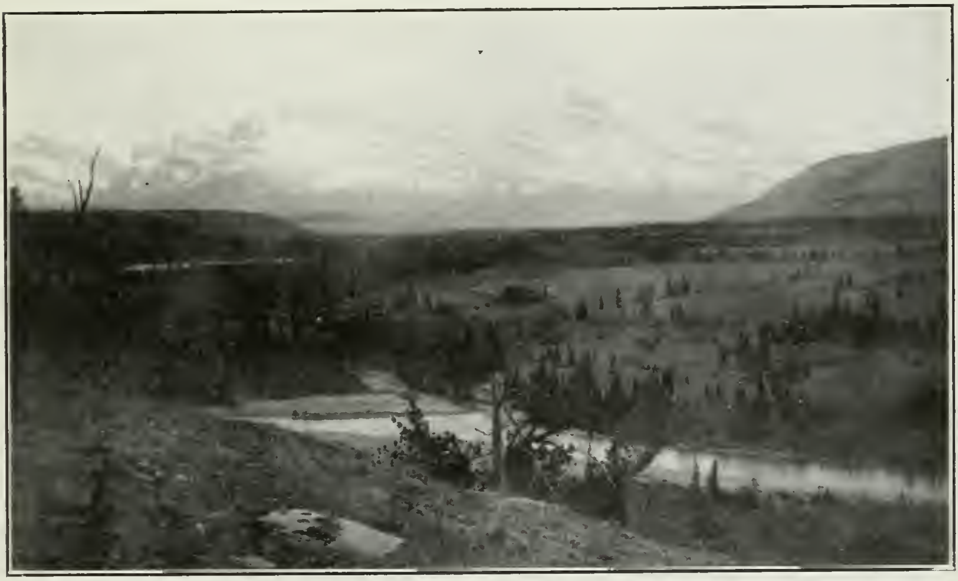


Photo G. H. Edgecombe, 1911.

Clearwater Forest Reserve: Kootenay Plains and Brazeau Range.

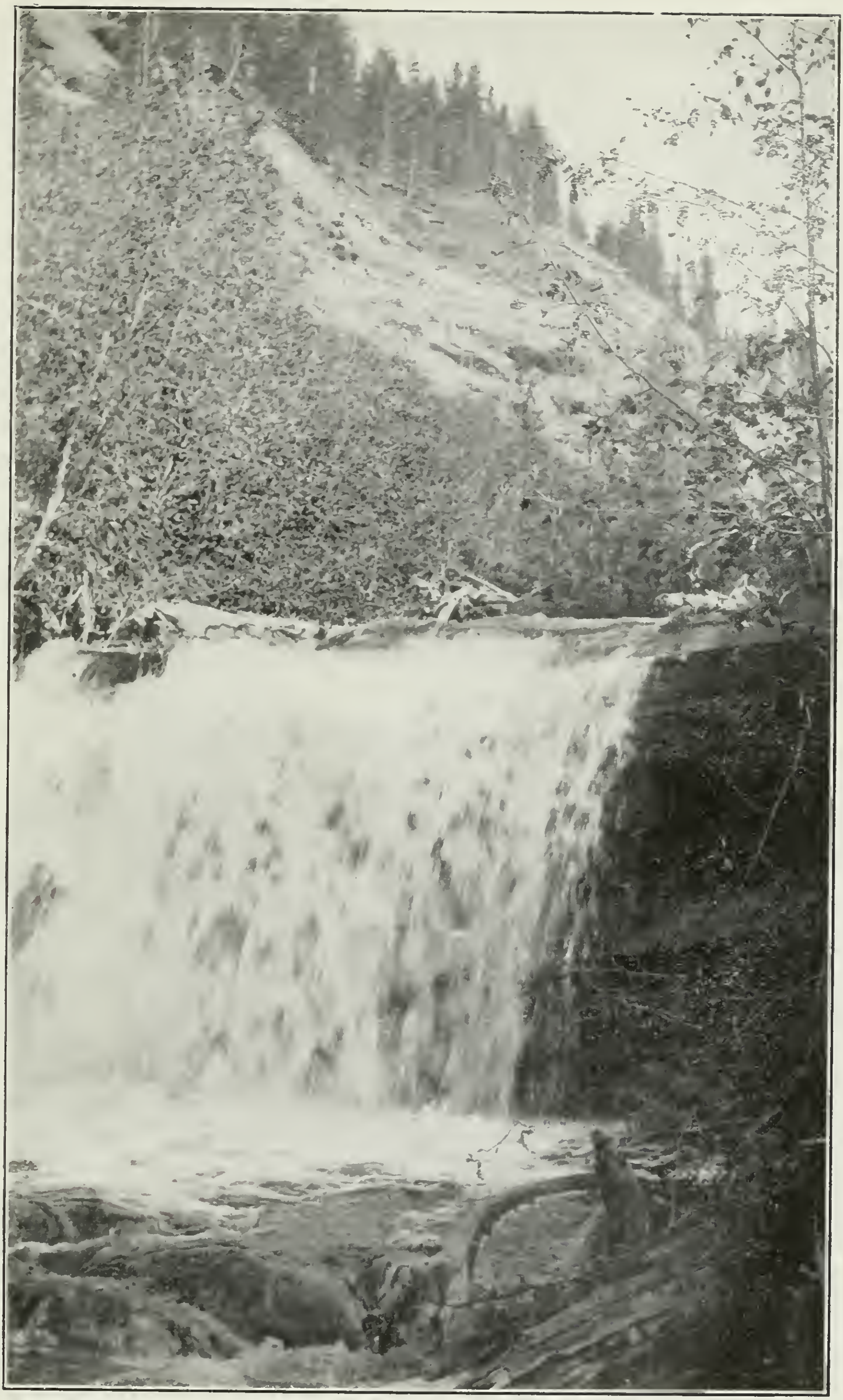


Photo G. H. Edgecombe, 1911.

Athabaska Forest Reserve: Falls on Creek running into Hay River.
Tp. 55, Rg. 25, west of 5th Meridian.

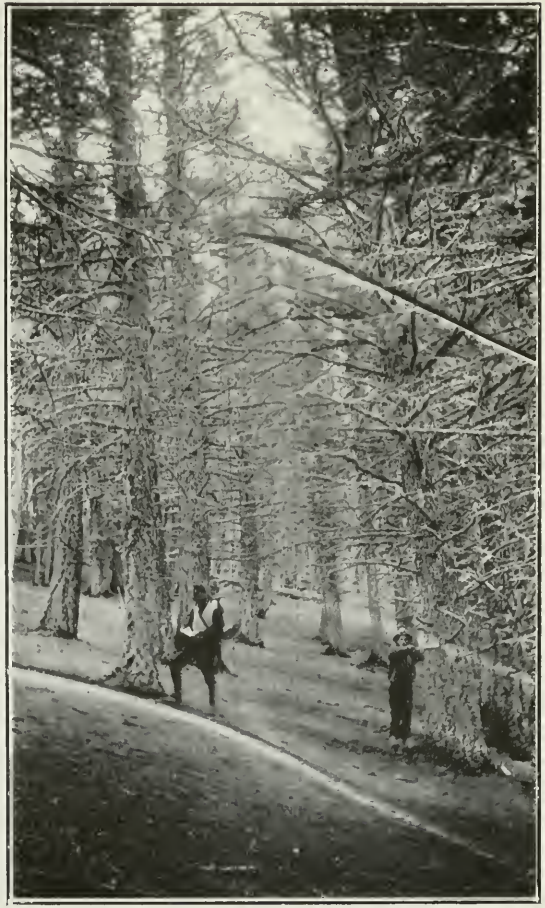


Photo E. G. McDougall, 1911.

Porcupine Hills, Alta.: Forest of Douglas Fir, partly Fire-killed.

Sec. 1, Tp. 15, Rg. 1, west of 5th Meridian.

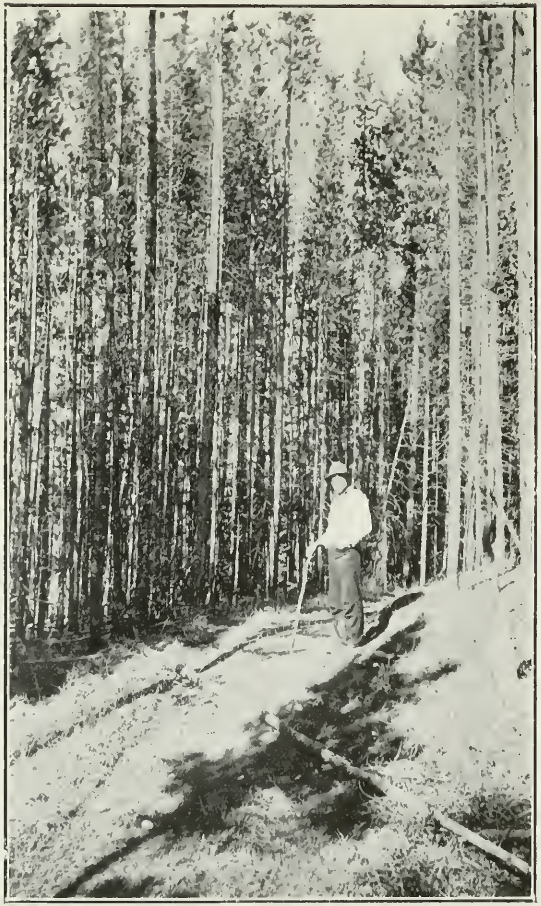


Photo D. Roy Cameron, 1911.

Lesser Slave Lake District: Pure Stand of Lodgepole Pine, South of Lesser Slave Lake.

Tp. 67, Rg. 8, west of 5th Meridian.

Photo E. G. McDougall, 1911.

A Burn in the Porcupine Hills, Alta., showing Reproduction, which is endangered by Fire.

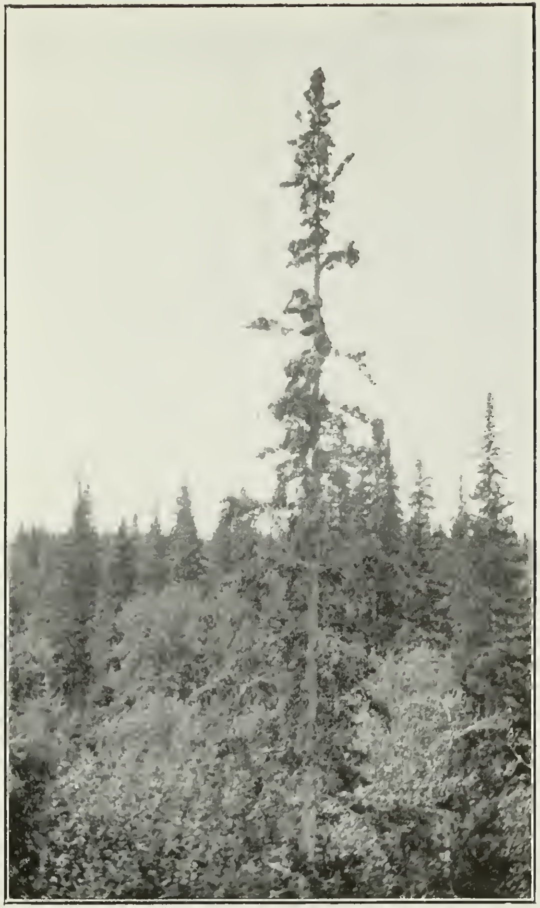


Photo W. J. Vandusen, 1911.

Forester Taking an Observation from Tree-top. Porcupine Mountains, Man.

Photo E. F. Drake, 1911.

Landing Reindeer from Canadian Government Steamer 'Montmagny' at Quebec.

Photo E. F. Drake, 1911.

Reindeer in Corral at End of Railway.

Photo R. J. Burley, 1911.

Blue-joint Hay Growing on an Old Barren Gumbo flat after One Year's Irrigation.

Photo F. T. Fletcher, 1911.
Typical Prairie Reservoir under Construction. N. C. Nelson.
Tp. 5, Rg. 24, W. 3rd M.

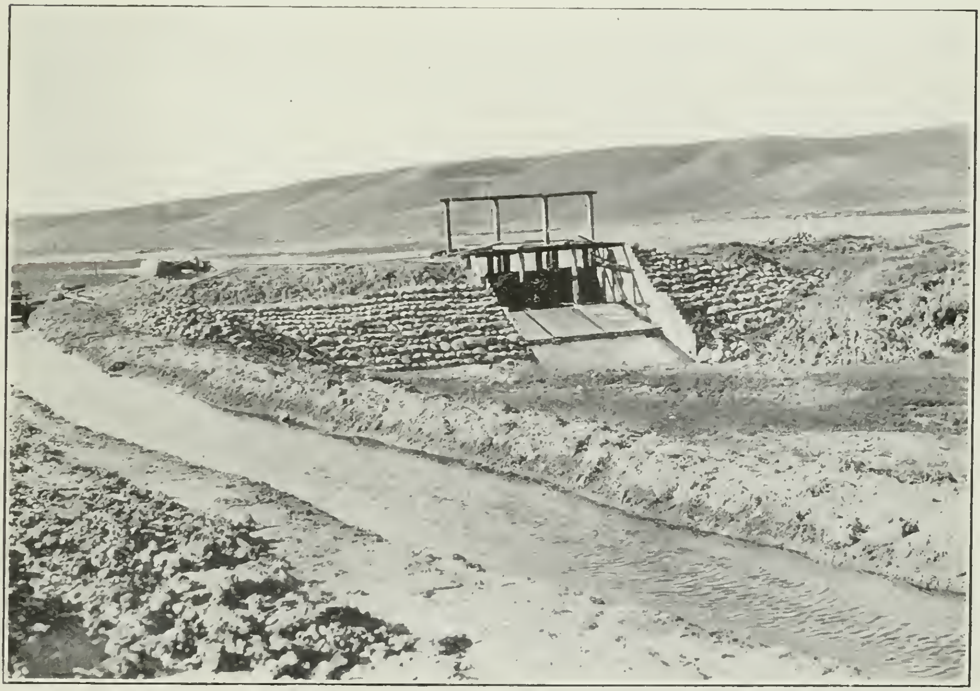


Photo R. J. Burley, 1911.
Wastegate. MacKinnon Brothers' Scheme.
Tp. 5, Rg. 1, W. 4th M.

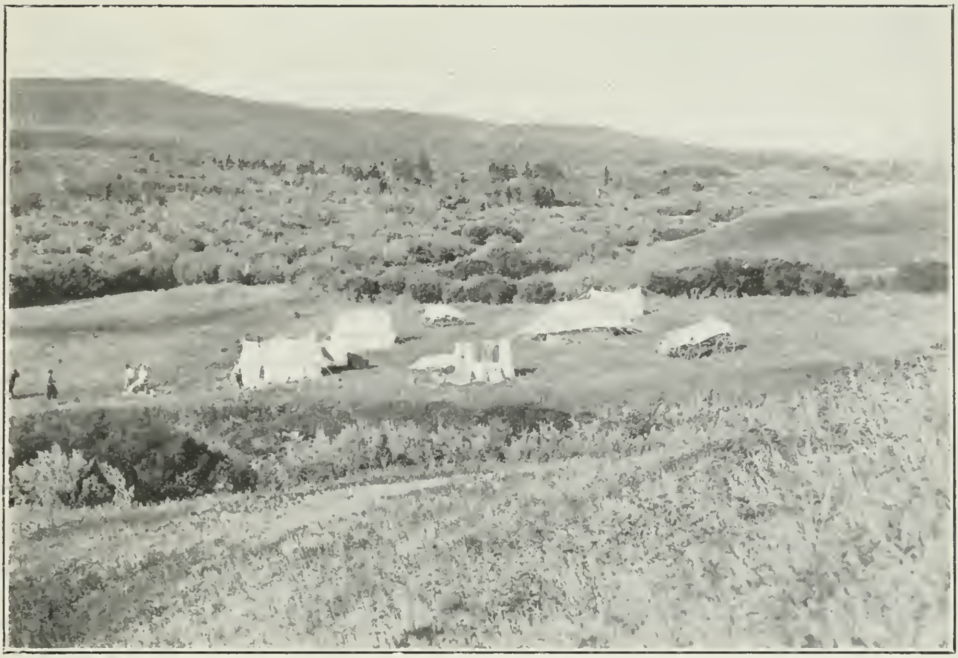


Photo R. J. Burley.

Irrigation Inspecting Engineers' Camp in the Cypress Hills.

Photo R. J. Burley.

Irrigation Inspecting Engineer Moving Camp.

Photo F. T. Fletcher, 1911.

A Four-horse Team Moving Camp.

Photo E. F. Drake, 1911.

The Head-waters of Battle Creek in Cypress Hills Forest Reserve.

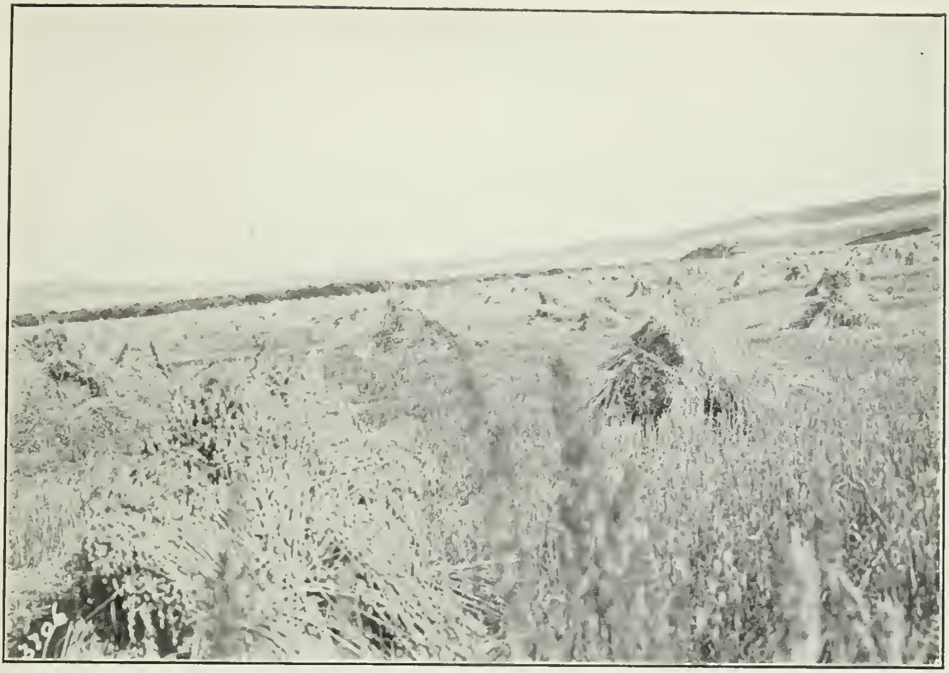


Photo R. J. Burley, 1911.

Irrigated Oats — H. B. Freel.
Tp. 6, Rg. 23, W. 3rd mer.

Photo F. T. Fletcher, 1911.

Canadian Pacific Railway dam at Gull Lake, Sask., for station water-supply.

Photo R. J. Burley, 1911.

Irrigated Barley on Enright & Strong Project.
Tp. 6, Rg. 23, west of 3rd Meridian.

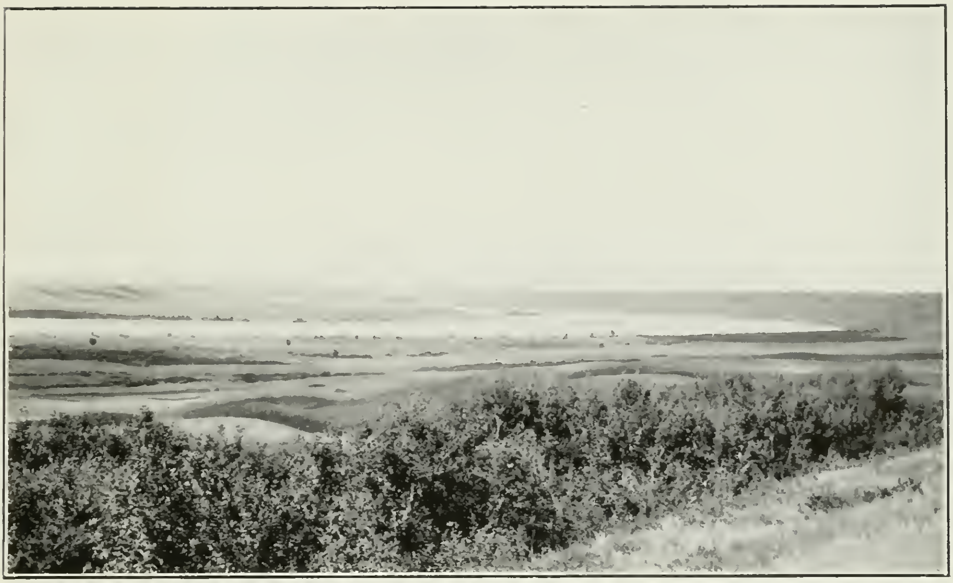
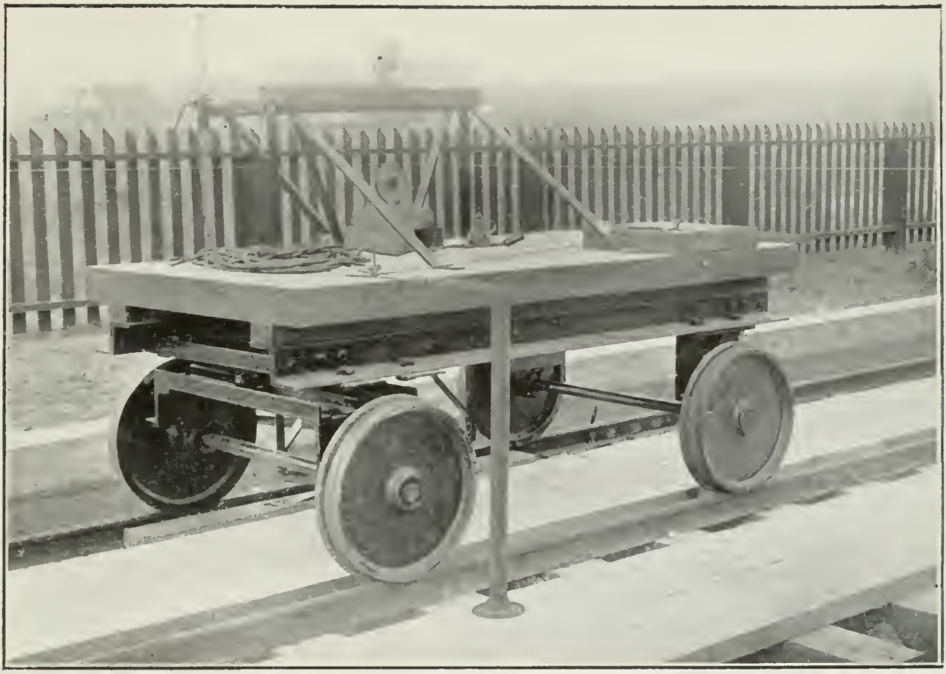


Photo F. H. Peters, 1911.

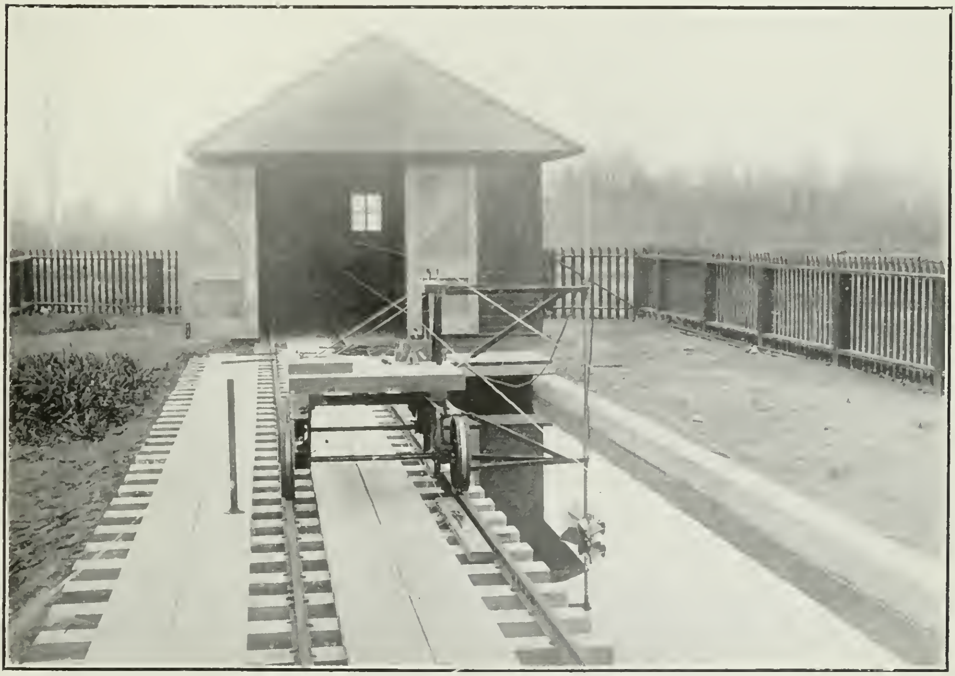
The South Saskatchewan river at Elbow, Sask.

Photo F. H. Peters, 1911.

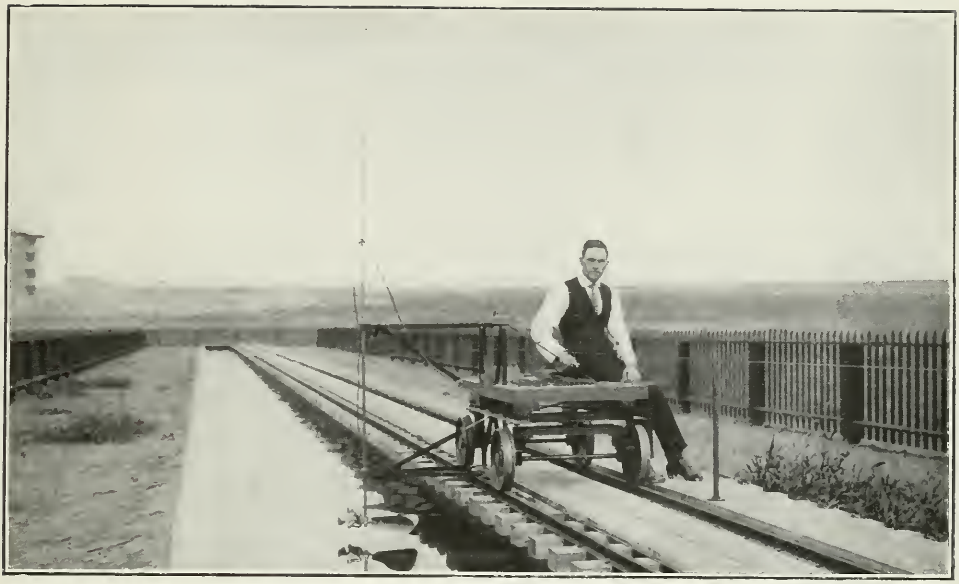
A typical view of the Qu'Appelle river, north of Tugaske, Sask.



View of Current Meter Rating Car, showing trolleys and switches.



End view of Current Meter Rating Car, showing car house behind



General view of the Current Meter Rating Car at rest.

The Current Meter Rating Car in motion.